A COMPEND

OF

DOMESTIC MIDWIFERY,

FOR THE USE OF

FEMALE PRACTITIONERS,

BEING AN APPENDIX TO

BUCHAN'S DOMESTIC MEDICINE.

CHARLESTON, S. C.

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District of South-Carolina, to wit:

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JAMES JERVEY,
Clerk of the District of South-Carolina.

DOMESTIC MIDWIFERY.

CHAPTER I.

Midwifery is that branch of Medical Science which teaches the art of assisting nature, in bringing forth a perfect *Foetus* or child from the womb of the Mother.

Midwifery ought therefore to be well understood by all who are already, or are likely to become Mothers, to the intent that they might not only be from thence enabled to assist themselves, but also to aid and assist others.—And as it often happens that the management of lying-in women is entrusted wholly to the care of persons entirely ignorant of the Art, it becomes the duty of Professional men, as much as possible to remedy this evil, by a plain statement of the fundamental parts of this science—so that those who are without the advantages of regular Practitioners, in cases of difficulty, may have their ideas properly enlarged, and their sphere of usefulness happily extended.

With this object in view, together with the original design of the Humane Author of the Domestic Medicine, the present Compend of Domestic Midwifery has been compiled agreeably to the established practice of the most approved authors—viz. Brevitt, Bard, Baudelocque, Hamilton, Shaw, &c. &c.—by

John L. E. W. Shecut.
Author of Flora Cardiniensis.

SECTION 1.

Anatomy of the Pelvis or Basin.

The Pelvis with its appendages and contents are the only parts of the Mother immediately concerned in the delivery. The Anatomy of the Pelvis is of importance to be known, since it consists of many parts, some of which serve to expel, while others merely form the Canal destined for the passage of the child. These are divided into active and passive, and again into hard and soft. The active parts comprehend the *Uterus* or Womb, the abdominal Muscles, &c. While the passive is comprehended by the *Pelvis* or Basin, and the soft parts which cover it, both within and without.

The hard parts or bones form the Basis or fabric of the whole, and serve to give it shape and firmness—

In Infancy the Pelvis consists of and is formed by eight bones: which, as the subject advances to maturity, become completely *ossified* or united together; forming by this union, as it were but one bone. It is however of importance to retain the original names

assigned to those eight bones. and at the same time to observe, that after they become thus united, Anatomists for the sake of distinction have termed it *ossa innominata* or the nameless bone, since they were respectively named before.—Notwithstanding this union, on examining a Female Pelvis, the parts of their junction may be discovered, as well as the traces of their several original forms before this union.

To elucidate the subject more fully the following anatomical description of the Pelvis is given, viz.—

The Bones of the Pelvis.

1st. *Os: Sacrum*, sacred bone, so called because the antients formerly offered this bone in their sacrifices—it is also called the Haunch bone.

2d. *Os: Coccyx*. The Rump or *Tail* bone—

3d. *Ossa-innominata*. The nameless bones, which are formed of the following bones in pairs on each side—

Ossa-ilia or hip-bones one on each side.

Ossa-Pubis or share bones, one each side front, and

Ossa-ischia or seat bones.

The *Os: Sacrum* or sacred bone, is joined to the last bone of the true Spine, and is generally called the first of the false Vertebra; it is of an irregular triangular figure, internally concave, externally unequally convex or rounded, having many perforations through it, from which circumstance it is the lightest bone of its size in the Skeleton In infancy this bone is also divided into five distinct portions, which become ossified into one, as the subject advances to maturity, and like the innominata, the traces of those divisions are marked, even in extreme age, by four transverse lines on its inner surface.

The *Os: Coccyx* or Coccygis, Rump bone is by some Anatomists considered only as a continuation or elongation of the *Sacrum:* it is made up of five distinct bony portions, which at the time of birth is in part *Cartilaginous* or gristly; but at puberty the ossification is complete, they nevertheless remain united by Cartilage. It is of a triangular figure decreasing from above downward nearly to a point, and which in all animals of the brute kind terminate in an actual tail, hence the name tail bone!—It has an extensive motion forward and backward, at the junction of each bony portion, but most so at the Union with the inferior surface of the *Os Sacrum*—it is internally very concave for the support of the intestines and muscles that are attached to it. It is externally very convex.

The Mobility or motion of the *Os: Coccyx*, as the person increases in age continues more and more to be diminished and particularly when the Cartilaginous divisions have not been kept flexible, are soon ossified; Hence we may assign one very probable reason, why those females who remain long single have generally difficult and laborious labours, especially with their first child.

This bone in advanced age is so firmly united to the *Sacrum* as to form with it one complete bone.—

The *Ossa innominata* or nameless bones, one on each side, are fixed to the upper half of the *Sacrum* by an immovable articulation; they

are firmly glued together, and their Union secured by strong ligamentous bands at the fore part, in a line directly down from the Navel. In infancy it is divided into three distinct portions or bones, which Anatomists for distinction have called, 1st. *Ossa-ilia* the hip bones—2d. *Ossa-Pubis* or Share bones and—3d. *Ossa-ischium* or seat bones.

That part of the *ossa-innominata* which is formed by the *ossailia* or hip-bones, at each side spreads upwards & outwards, and forms the sides of the lower belly, its upper edge is somewhat semi-circular, and affords room for the insertion of many muscles; at the fore part above the tops of the thighs, its edge becomes irregular having two projections to which fleshy portions are attached— The under part of this portion of the *innominata* only belongs to the *Pelvis* properly so called, it forms a ridge which is continued from the top of the sacred bones, below which it is scooped out, to make a large notch. Through this opening a large nerve and blood vessels pass to the lower extremities. It is by much the largest portion of the innominata: The superior semi-circular edge is called its spine; and is covered by a strong cartilaginous substance on the outer surface, which is called its *dorsum* or back; it gives out four processes which are called the spinal processes of the hip bone.

Two of these processes are situated superior and anteriorly, and two are situated inferior and anteriorly: and continued as far back as the transverse section of the *acetabulum* of which it forms about one third.

The internal surface of this bone is concave, or hollowed to enlarge the dimensions of the Cavity of the Pelvis: A sharp ridge is observable some way down its inner surface which arises posteriorly, continuing forward till it unites with its fellow, when it nearly surrounds the whole cavity of the Pelvis, and is thence termed the Brim of the Pelvis: above which is situated an aperture or opening for the passage of the medullary vessels.

The second portion of the *innominata* termed *ischia* or the seat bone, extends from below the fore-part of the *ilia* to the fleshy protuberances on which the body rests in sitting, (and is hence by some writers termed also *os: sedentarium*) and is there defended by gristle: This bone also gives off a second process, continued forward and upwards, and on its superior part forms the segment or part of a circle, and unites with the *ossa-pubis* on the superior thick portion of this bone posteriorly, is formed a sharp process called the spinous process of the *ischium* from whence several muscles arise, and has attached to it the *Sacrosiatic* ligament, which is a strong ligamentous substance extended from one process to the other, leaving an opening which is closed by a soft substance.

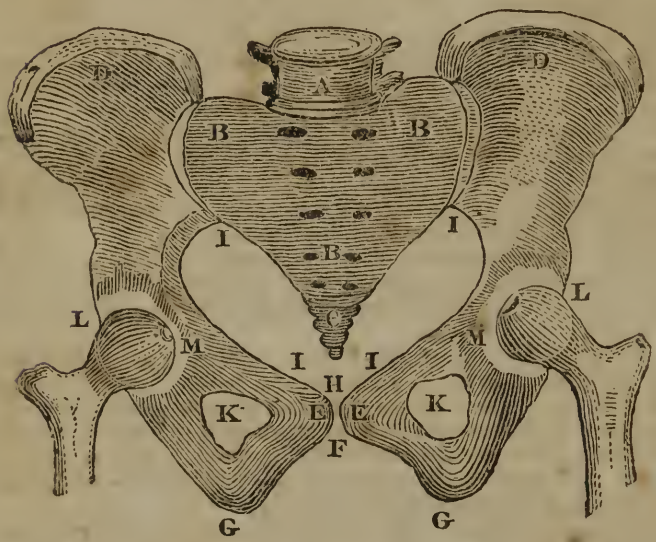
The *Ossa-Pubis* or third and last bony portion of the *innominata* occupies the space between the groins. It originates at the *acetabulum* where it is largest, diminishes as it advances forward and inward when it again increases and gives off a process inferiorly, which unites with the *ramus* or leg of the *ischium*, forming a large oval aperture called the *foramen ovale vel thyroidea;* it is afterwards united with its fellow by a strong cartilaginous union called *symphisis pubis* which together form an arch extending from one side to the other of the pelvis anteriorly.—

By the upper edge of the Pubes—the line formed by the *sacrum* and *ischia* is continued and constitutes the ring which is called the Brim of the Pelvis. This ring or rim as already observed is of an irregular figure, and differs in male and female both in shape and size.

In order farther to elucidate this subject it has been thought proper to give the following plates explanatory of the female pelvis.

PLATE 1st.

Front view of the bones of a Female Pelvis.

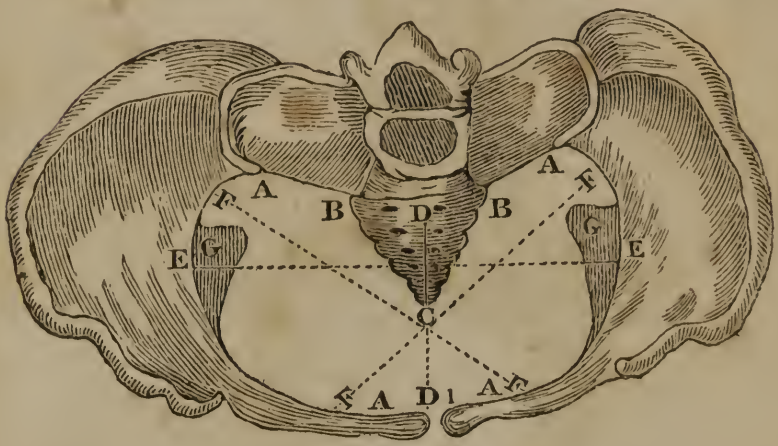


A. The last Vertebra of the loins.
B. B. B. The Os Sacrum or Sacred-bone.
C. The Os: Coccyx or Tail bone.
D. D. The Os-ilia or Hip bones.
B. E. The Os. Pubes or Share bones.
F. The arch of the Pubes.
G. G. The Os. Ischia or Seat bones.
H. The Symphisis pubes
I I. I. I The ring or Brim of the Pelvis.
K. K. The Foramen ovale.
L L. The thigh bones and their sockets.
M. M. The Acetabulum. The Cavity or Cup, which receives the heads of the thigh bones.—

From the foregoing view it is observable that the Pelvis or Basin is that large irregular circle of bone which supports the body, by its attachment to the back bone at A the bottom of the loins, and by the sockets L. L. which it affords to the heads of the thigh-bones; and which contains and defends within its cavity the bladder of Urine, the rectum or straight gut, and between them the Womb.

PLATE 2d.

The bones of the Pelvis, placed in such a manner, as if resting on the Pubis, and affording the Student a view of its superior opening.



A. A. A. A. The Ring or Brim of the Pelvis.

B. B. The Sacrum and C. the Coccyx turned down to the view.

D. D. 1. The direct and shortest diameter of the Pelvis from the Pubes to the sacrum, termed by M. Baudelocque the great diameter.

E. E. Transverse or longest diameter in the Skeleton—by do. the little diameter.

F. F. F. F. Diagonal or longest diameter in the living subject.

G. G. Sharp processes of the *ischia* or seat bones.

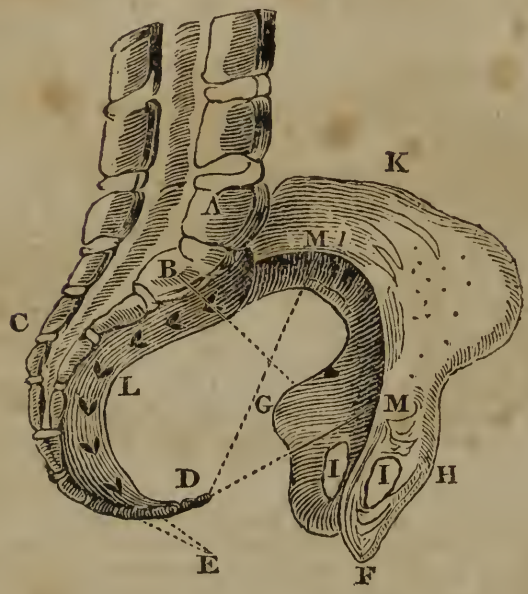
This Plate is so drawn and placed as to afford a view through the superior opening of the pelvis, as to look through the brim from above, by which its shape and diminions, together with the parts of each bone which form it, are more easily and distinctly seen

From this view the shape of the Pelvis will appear nearly oval, being longest from side to side E. E. and narrower from the Pubes at D. 1. to the sacrum at D. which in a well formed pelvis will measure from four to four and a quarter inches on the Skeleton, and from E. to E the transverse or longest diameter from five to five and a quarter inches, when divested of the flesh and membranes.—

The flesh and Membranes which constitute the soft parts of the Pelvis, in the living subject cover the bones or hard parts, and consequently lessens these dimensions about one inch; but with a lining which will yield considerably to pressure. This lining, likewise is not of equal thickness in all the parts, and is so much thicker at the sides E. E. in a living subject, that the longest diameter of the brim in them is at F. F. F. F. but which in the Skeleton is from E. to E.—

PLATE 3d.

Lateral Section of the bones of the Pelvis.



A. The last Vertebra of the loins, being a section or half part.
B. The first Vertebra of the Sacrum. C. the Sacrum.
D. The Os: Coccyx. E. The same bone bent backwards.
F. The blunt tuber of the *ischia*.
G. The sharp process of the ischia.
H. The Pubes. I. I The foramen.
K The ilia. L. The hollow of the Sacrum.
M M. The section of the Brim of the Pelvis.

In this plate the body is supposed to be cleft perpendicularly through the back bone behind, as at D. plate 2d. and through the *Symphisis pubis* or joining of the share bones as at D. 1. plate 2d.—It is designed to show again the brim of the Pelvis in a lateral view, and particularly to demonstrate how much the short diameter of the brim, depends upon the distance between the projection of the Sacrum at B. and the pubes or share bones at H.—The contraction of this space in ill formed women, is one principal cause of all the difficulties which occur in tedious and dangerous labours.—This plate also shews the depth of the Pelvis behind, that is from the brim at M 1. to the Coccyx at D. which being movable as it consists of four joints, it retires when pressed upon by the child's forehead and increases the distance between this small bone and the pubes about one inch, as may be seen by the dotted lines E. being the coccyx

retiring backward, by which the vertex (or that part of the childs head on which the hair diverges) and which is commonly the presenting part, is allowed to slip more easily from under the pubes.—When the coccyx is pushed as far back as it will commonly yield, the depth of the brim at this part is about five and a half or six inches from the brim at M. to the sharp process of the *ischium* at G. and again from M. to F. the blunt tuber of the *ischium* three and a half inches; and before, where the depth of the *pelvis* is no more than that of the *pubes* H. about one and a half or at most two inches.

The knowledge of these circumstances will prevent the midwife from being deceived in forming an opinion, how far the childs head has advanced during labour; for although it may readily be felt under the *pubes*, she must not therefore conclude it has descended much, if at all below the brim of the *pelvis* unless by passing the finger back, she can at the same time discover it filling the hollow of the *Sacrum* as at L. and beginning to rest on the *coccyx* at D.

This plate also shews the hollow of the *Sacrum* which greatly enlarges the size of the *pelvis* below the *brim*, and allows the childs head, as soon as it has passed the *brim*, to retire backwards, as it sinks down upon the *coccyx*, whose mobility has already been mentioned.—In some subjects a little advanced in life the *coccyx* is not only united as one bone to the sacrum, but the small bones of which it is composed are likewise firmly united with each other; so that it makes some resistance, and increases the difficulty of the first birth. The contractions of the womb however will overcome this difficulty, and it has often been known to give way with a crack heard by the Midwife and attendants, after this, in subsequent labours, the same difficulty seldom occurs.

The foregoing remarks will serve the reader as explanatory of a regular or well formed Pelvis.—She has yet to be informed, that there are some irregularities in the Pelvis of some Females, which renders labour tedious or difficult. To explain these deformities the following section is arranged for their satisfaction—

SECTION 2.

Of the Deformities of the Pelvis.

The different states in which the dimensions of the *Pelvis* vary so much from those already described, as to disturb the natural order of labour and render it more or less difficult, ought to be accounted as so many deformities: If we consider them relative to that function, they all consist in the excess or defect of size in the cavity of the *Pelvis*—

These principal faults may affect all parts of the *Pelvis* or one alone; and often one of these faults is the consequence of another, or arises from the same cause. The variety of these faults are so

numerous that it would be vain to attempt to distinguish them in this work, but such as are most essential to be known we cannot omit.

Those which are most obvious are, 1. an enlarged Pelvis or a Pelvis with too great Capacity—2d. a Narrow or contracted Pelvis and 3d. a distorted or deformed Pelvis.—

At first view it might be natural to suppose that an enlarged pelvis would be considered an advantage in labour, as the childs head must experience less friction in its passage, fewer efforts of the mother are required to expel it, and the labour is less painful—If we confine this idea to delivery strictly speaking it is generally true: but experience too often had, has taught, that this slender advantage is dearly paid for by lasting inconveniencies, either before or after delivery. Women who enjoy a conformation so favorable in appearances, are more exposed than others to the effects of obliquity of the *uterus* or womb and to its descent; especially in time of labour, when the *viscus* already charged with the weight of the child, is entirely subjected to the expulsive force of the abdominal muscles. Feebly retained by its ligaments, in women who have already had several children, the womb is habitually lower and descends lower still in the subsequent pregnancies, till it be sufficiently developed to rest on the margin of the *pelvis;* which does not take place till after the first four or five months: Before that time it gravitates strongly or the extremity of the *rectum* and as well by its weight as volume impedes the discharge of the *fæces* or excrements and urine. This circumstance of the womb impedes also the free course of the blood in the veins which pass through the *pelvis*, which is often the cause of very important accidents. If they partly vanish towards the middle of pregnancy, they sometimes reappear at the latter end, because the childs head engages early in the pelvis and acts, as it increases on the same parts as the total of the womb did before. If we add to these accidents those which may result from a too sudden and too easy delivery, it will not appear surprising that *M. Baudelocque* should reckon an excess of amplitude in the *pelvis* among the faults in the conformation of that cavity.

The second general fault or deformity is the narrow or Contracted pelvis—this as it respects delivery ought to be distinguished into relative and absolute.—The relative arises from the extraordinary size of the childs head; or from its bad position; the absolute from the bad conformation of the *pelvis* itself.—

Absolute narrowness, is rarely found in all parts of the *pelvis* at the same time; in general it affects but one of the straits, and in that case the other is pretty commonly of the natural size, and sometimes a little larger than usual. This fault is more frequent in the superior strait than in the inferior, and we observe that it almost always affects the strait in its small diameter and very rarely in its transverse, and sometimes it affects only one side. We remark the contrary in the inferior strait for there it is generally caused by the approximation of the tuberosities of the *ischia* by referring to the diameters of plate 2d the reader will perceive the dimensions of those straits delineated by dotted lines across the Pelvis or basin.

Writers on Midwifery assign as one cause of the contracted pelvis, the rickets in children, and *M. Baudelocque* whose writings are frequently referred to in this chapter observes, if we consider the direction of the forces which act on the *pelvis* in rickety children in whom the bones are at the same time softer and more loosely connected than in the natural state, we, shall see that the greater part of those forces tend to carry the base of the *Sacrum* forward and the *ossa-pubes* backward. Whether the child be standing or sitting if we attend to the direction of the spinal column, we shall see that the weight of the body must insensibly push the base of the *Sacrum* towards the *pubes;* and that it acts in the same manner on the inner parts of the *acetabulum* which serve as a *fulcrum* or support to the inferior extremities when the child is standing or walking. The *ossa-pubes*, particularly in these latter cases must be pushed towards the *Sacrum;* but in such a manner however, that their posterior extremeties often approach a little nearer to the projection of the base of that bone than their anterior extremities or the *Symphisis* If the superior strait does not constantly present the same figure in *deformed pelvis;* if it is sometimes larger on one side than the other; if one of the *acetabula* is nearer to the *Sacrum* while the other approaches less; if the *Symphisis* of the *pubes* is removed in many cases, from a line which would divide the body into two equal parts—it is because the rickets has not equally affected all the bones of the *pelvis*, nor equally hurt all their junctions; and because the attitude which the child takes in walking or sitting may change a little the direction of the compressing powers just mentioned.—

The weight of the body, the action of the Muscles, which are attached to the *pelvis* the pressure of the clothes, and that which is occasioned by the arms of the nurse contribute something to the deformities in question, but much less than the weight of the trunk; whence we see of what importance it is to keep rickety children in bed and leave them at liberty, instead of obliging them to walk, sit up, or have them constantly in the arms of the nurse.—

Of the other variations and their consequences we shall say more under the head of delivery—and come next to consider the distorted and deformed *Pelvis*.—Any material alteration in the formation of the bones of the *Pelvis* either natural, or from accident or disease must in an equal proportion retard the progress of parturition and make labour tedious and difficult.—If these distortions happen in a great degree and the child is full grown, the delivery is impracticable, without injury to the mother or offspring. The Cæsarean operation, the section of the *pubes* and premature delivery have been recommended in these cases: but the first is the only one which surgery has authorised, with regar to the second we shall say more hereafter—and of the latter it is sufficient to observe that the laws have judiciously proscribed the practice.—

The *pelvis* may measure its full distance from the *symphisis pubis* (Plate 2, D.) to the projection of the *Sacrum* and the diameter be very considerably diminished, by their branches being depressed, or convexity lessened on the external surfaces forming an angle instead of an arch at their junction; and if the distance, in the last instance be

found diminished, the angle of the pubes becomes still more acute, which in an equal degree is found to increase the obstruction of the passing of the *fœtus*.

The *os coccygis* plate 3d C. is sometimes found curved up like a hook, in which case it is natural to suppose that it would obstruct the deliver, but it has been asserted that this distortion never obstructs the progress of labour, for when it exists it is always in an equal degree turned to one side.—

The distortions of the *os Sacrum* occasioned by the rickets has been already mentioned, these may be occasioned by other diseases, by which the cavity of the pelvis becomes to be very materially diminished.—The tuberosities of the *os ischium* plate 2d G. G. may also be too near each other, and consequently in an equal degree diminish the apperture or outlet of the *pelvis*.

The *vertebræ* of the loins plate 3d A are sometimes so protruded forwards as to diminish the cavity of the *pelvis;* sometimes the distortion is confined to the brim and larger *pelvis* which is difficult to be discovered till the labour is somewav advanced, when the conical point of the head descends sufficiently to be discovered by the touch: and the bones of the Sutures are found to lap considerably more than common over each other and leads you to suspect this species of distortion—and which frequently is attended with danger, for though the woman may be delivered naturally, it happens sometimes that the soft parts which line the *pelvis* being subjected to a strong pressure, even to a kind of contusion, inflame, become painful and sometimes terminate in suppuration and gangrene: on the other side the bones of the childs head riding one over the other, or being fractured and depressed, compress and wound the brain, which causes it to become plethoric and produces internal extravasations, which are generally mortal.—

These are the principal or most common distortions to which the female *pelvis* is subjected, and when in a very great degree the expulsion of the *fœtus* is reduced to an impossible event for nature to accomplish alone, here then the assistance of art is actually necessary, and the manual operation must be resorted to, either upon the *fœtus* by lessening the head, or upon the mother by incision, as before mentioned.—

We shall conclude this section with the following remarks. A female naturally well formed and who has borne many children with ease and safety; may afterwards have the *pelvis* become distorted by accident or disease, as fracture, softening of the bones &c. These distortions of the *pelvis* may generally be judged of by external appearances. which however is only a probable decision—viz Too great a curvature of the spine or *vertebra* of the loins inward. The legs and thighs crooked and shortened, the navel appearing at a greater distance from the head than the feet; and the woman has a shuffling walk, bringing forward first one hip and then the other, under these circumstances there is very great reason to suspect, the *Pelvis* equally shares the distortion Although the foregoing may be correct in the general yet it is not so universally, for some women with all the external marks just now described have been found with a tolerably well formed *pelvis:* and have, though

perhaps with extraordinary difficulty, borne many healthy full grown children. The Spine may be curved to the right or the left, a circumstance frequently caused by young girls quilting, and yet the pelvis no way deformed. As a maxim, when a woman is well proportioned in the lower extremities and walks well. the pelvis is generally well formed, whatever contortions the spine may have suffered, but if she is affected in her walk we may conclude the pelvis labours under some degree of contortion.

SECTION 3.

Of the Womb and its appendages.

In this section we shall consider the contents of the *Pelvis* in an unimpregnated state. These are the *intestinum rectum* or straight-gut the bladder of Urine, muscles, ligaments, nerves and blood-vessels, and lastly the womb and its appendages. Of these such only as are intimately connected with delivery will be particularly noticed, the rest we leave for the consideration of the scientific.—

The *intestinum rectum* or straight-gut is a continuation of the *Colon* through the *Pelvis* to the *anus*, its ordinary position is along the curvature of the *Sacrum* in the direction of B. L. D. in plate 3d —

The bladder of Urine is situated in that part of the *Pelvis* which is marked by the letters I. M M 1. *Plate* 3d. And the womb immediately between them both.—

The Womb is a small hollow organ shaped somewhat like a pear flattened, and is placed in the cavity of the *pelvis* or basin between the straight-gut and bladder as already observed. It is divided in o the bottom, the body, the neck, and the mouth. The bottom is the line between the two upper corners: it is placed somewhat below the brim of the basin, and is about two inches in extent. Cheselden says that the womb is about one inch thick, two broad, and large enough to contain the kernel of a hazel-nut; but in women that have had children a little larger The mouth is the lowest part of the womb; it consists of a small opening surrounded by two pretty thick lips; the appearance however of this part varies in different women. The body and neck, each contributing almost equal proportions, form the space between the bottom and mouth.

The substance of the womb is fleshy. but it is more compact than that of any other fleshy part. It is supplied with a number of blood-vessels lymphatics and nerves, which are so much compressed that their course cannot be traced. The inside of the womb is lined with a very fine skin, which is somewhat wrinkled in young-women particularly towards the neck, the structure of this skin is not properly understood. The extremities of many very minute vessels can be perceived on its surface; and between the wrinkles there are small mucous glands. From the inside of the womb the periodical evacuation or monthly discharges proceed.—

In the natural unimpregnated state there is no cavity in the womb, for the sides of its internal surface say some anatomists, are every where in contact. There are three openings in the womb, at the bottom one at each corner, and one at the mouth, the former are always very minute, the latter varies in different women.—

From the foregoing outline of the position of the womb the midwife may not only learn the relative situation and connexions: but she will also readily see and understand the reason why diseases, or changes of the womb, bladder and straight-gut constantly affect each other—The womb being enlarged by impregnation must naturally press on the gut and thence retard the passage of the excrements; and its neck may also press on the neck of the bladder and prevent the exit of the Urine or the body of the womb may press on the *fundus* of the bladder and prevent the patient from retaining her Urine. If the womb fall lower down into the *Vagina* or sheathe than its natural situation, it must drag the neck of the bladder with it, or if the over distended bladder rises up above the *pubes* it must carry the neck of the womb with it; and inflammation, tremors, or ulcers of either of these parts must be readily communicated to the others. She will also learn by attending particularly to the situation and direction of the straight-gut and the Urinary canal, easily and skilfully to perform two common operations; administering a Clyster, and introducing a Catheter to draw off the Urine. These operations from motives of delicacy alone, ought ever to be performed by women, and a proper knowledge of them is of the utmost importance towards relieving the patient in the above cases. *See Chap. III. Section 2.*

The *appendages of the Womb* may be considered both internally and externally—The internal consists of the following.—The mouth of the womb hangs into a canal which serves as the passage to that organ. This canal called *Vagina* a case or sheathe leading from the *pudendum* to the neck of the womb, to which it is attached, higher at the back than the forepart, forms an angle with it.—

The *Vagina* is a membranous, fleshy canal composed of several layers, capable of being considerably enlarged on different occasions. Its ordinary length is about four or five inches and its breadth between one and two.—The layer which constitutes the inside of the *Vagina* being much longer than the other forms a number of small folds, which are obliterated after frequent childbearing &c. This layer has many mucous glands over its surface and is extremely sensible.

The Vagina connected to the womb in the manner already described, passes down between the straight-gut and bladder under the arch of the share bones, it is united with the bladder and the passage leading to that organ, at the forepart in its whole extent, and in a certain degree at the back part with the straight-gut.

The skin which covers the external surface of the womb, and is the same with that which lines the whole belly, forms at each side a broad doubling called the broad-ligaments. These doublings connect the womb to the sides of the *pelvis;* in so loose a manner, however that they do not prevent it from occasionally changing its situation. They afford also support to the blood-vessels, nerves and

lymphatics of the womb. From each corner of the bottom of the womb two small narrow fleshy canals run along the upper part of the broad ligaments in a curved direction: and terminate at the sides of the *pelvis* in a fringed substance which hangs loosely in the cavity of the belly. These are the *Tubæ Fallopianæ* or Fallopian tubes, one end of which is connected to the womb, and the side to the *ovarium* by a membran. Among the fringed ends is a small orifice which leads into the tube—which near this end is about a quarter of an inch diamater, and thence growing gradually smaller passes to the womb (at one of these openings before described) and enters there with an orifice about the size of a hogs bristle, The use of these tubes is to convey the male seed from the womb to the *ovaria* to impregnate the eggs for conceptions.—About one inch from the womb at each side two small bodies are placed resembling a Nutmeg flattened. These are termed *ovaria*, they have spermatic vessels, and contain small pellucid eggs from which they have their name. There are two arteries and two veins which pass to and from the *ovaries* or testes, in the same manner that they do in the male, but make more windings, and the arteries dilate more suddenly in proportion as they are shorter. These arteries and veins detach branches into the womb and *fallopian tubes* and not only make communication betwixt the artery and vein on one side and those of the other, but also with the proper vessels of the womb, detached from the internal *iliac* arteries and veins. From these vessels both arteries and viens in the inside of the womb the menstrual purgations are made in women.

In young healthy women the ovaria are plump, large and rounded, and become shrivelled and small in those who have had many children— The structure of them though certainly glandular, is as yet imperfectly known.

At the fore part of the womb below the beginning of each Fallopian tube are the *ligamenta rotunda* or round ligaments. these pass through the perforation in the lower edge of the abdominal muscles, and are inserted in the groins where they are lost, in the adipose or fatty membrane immediately under the integuments or skins: they are made up of muscular fibres, nerves and blood-vessels and serve to retain the womb in its natural situation.

The appendages of the womb considered externally are *Mons Veneris* or mount of venus, it is situated at the inferior termination of the abdomen immediately above the pubes, and is made up of adipose and cellular substances collected under it, and forms a kind of cushion which at puberty becomes covered with hair. At its inferior part is found to commence the *labia pudendi or alæ* which may be considered as a continuation of the *mons veneris*, and are found to bifurcate or divide immediately below the *pubes* forming a sinus which is continued to within about an inch of the *anus* or intestinal outlet, when they are again bounded by the *perinæum* a fleshy portion between the *vulva* and *anus*. The *labia* are found to be more ligamentous than the *mons veneris*, diminishing as they descend and terminate in mere integuments: they are internally lined by a fine glandular membrane separating a sebacious fluid to lubricate its surface, and is abundantly supplied with nerves and blood-vessels.—

A small hole is observable on each side of the inner surface of the *labia* when separated, which are the termination of the excretory ducts from two small follicular glands of the same name separating a viscid fluid. These holes are termed *Lacunæ*.

The two fleshy productions formed by a duplicature or fold of the internal membrane of the labia are called *nymphæ*, they are sometimes called *labia minora vel interna* or the lesser or internal lips: they commence by an acute angle, and are continued downward and outward, separating wider from each other as they are continued on the outside of the mouth of the vagina, where they are insensibly lost: they have also small glandular corpuscles which separate a sebaceous mucus to lubricate the parts adjacent.

The *Clitoris* is a small prominent red body found situated in the angle of the *nymphea* which serves it as a prepuce or covering, and appears like an imperforate glan: it is internally made up of a spongy substance and very elastic coats: Some way towards the *pubes* it is found divided into two *crura* or legs, and is inserted into the *rami* of these bones, it is abundantly furnished with nerves and blood vessels, and of exquisite sensibility, it is capable of extension and subject to much variety in size —

The *urethra* or excretory duct from the bladder, is found in a straight line, about one inch below the *clitoris* surrounded by small *labia* or prominences of muscular fibres forming a sort of sphincter muscle.

Os externum or aperture of the *vagina* immediately below the *urethra* is surrounded by a sphincter muscle originating from the *perinæum* continued upward and forward on each sid of the *os externum* and insensibly lost in the *crura* of the *clitoris*.

Hymen is a fine Membranous covering extending nearly over the *os externum*, and is peculiar to infancy, leaving only a small aperture for the escape of the Menstrual evacuation and is of a crescent-like form. It is ruptured on the consummation of Matrimony, and totally destroyed by parturition, leaving only a few irregular eminences on the inferior portion of the orifice: which from their supposed resemblance to myrtle leaves have been called *caruncule myrtiformes*. This Membrane has been considered by some as a test of virginity: but it is a very fallacious dependence as it may be destroyed by too great a flux of the menses, imprudence and other particular accidents, as inflammation, ulceration, Cancer &c.

The *perinæum* is that fleshy portion situated between the posterior commissure of the *vulva* and *anus* about one inch in length and divided into two equal portions by an external cutaneous line called the *raphe* a knowledge and attention to this part is in the practice of Midwifery of the first importance, of which more in its proper place.

SECTION 4.

Of the Bones of the childs head, &c.

The Divine Wisdom in the structure of the *fœtal* head has so wisely ordered it, that from the loose and imperfect manner in which the bones are formed and connected at birth, they are capable of being moulded into the proper shape for passing more easily through the brim and lower opening of the pelvis, especially when that is not perfectly well formed

The imperfect edges of these bones and their membranous connections, not only permit them to approach, but when it is necessary, to overlap each other considerably; and, with little or no injury to the child, admit so great a change of shape that the dimensions of the head are on some occasions completely changed; and the vertex or crown is pushed out into the form of a sugar loaf, by which the difficulties occasioned by the large size of the head, and by all the lesser degrees of contraction and deformity of the *pelvis*, are so far diminished as to manifest that but for this wise and benevolent formation, many children must have perished, or many women have died un-delivered. The dimensions of the childs head are naturally so much less than those of the openings of the *pelvis*, as to leave sufficient room for the fleshy coverings with which the pelvis is lined: the longest diameter of the head is from the forehead to the hind head, about four or four inches and a quarter; and the shortest from ear to ear, about three or three and a quarter inches.—On this subject M. Baudelocque observes that if we compare the dimensions of a childs head with those of a well formed *pelvis*, we shall see clearly that the latter might have some inches less in its circumference, and yet be large enough for an easy delivery: a common sized head, when it passes through that canal, presenting a circumference of no more than ten inches and a quarter, or ten and a half, only requires a passage of that size.—As the childs head enters the *pelvis* with one ear to the *pubes* and the other to the *Sacrum* or rather a little diagonally towards the opposite sides of these bones, and continues in that direction until the basis of the skull passes the brim of the pelvis: it then begins to turn, where it finds least resistance, the pains forcing it down, whilst the sharp processes of the *ischia* (plate 2d. G G) pressing diagonally on the sides of the head, one towards the crown and the other towards the forehead on the opposite side, compel it as it descends to turn with its longest diameter towards the longest diameter of the *pelvis;* until the face falls into the hollow of the *Sacrum* (as at L. plate 3d,) the nape of the neck against the *pubes* and the vertex or crown to the external orifice. Whilst the head of the child is making these turns, so as constantly to present its longest diameter to the longest diameter of the *pelvis*, the body of the child makes similar turns, so as to enter the pelvis with the shoulders from side to side: but as they descend, they are likewise by the same powers compelled to turn, by which means when they arrive at the lower opening of the *pelvis* one

shoulder presents to the *Sacrum* the other to the *pubes;* and this passing through the external orifice, a little before the other lessens the necessary distension of the soft parts. This taken in connection with the mobility of the *coccyx* and other bones of the *pelvis*, as have been already noticed; as also, that besides the bones of the head of the infant, many others which constitute one bone in the adult, are connected less firmly by cartilages and ligaments in the *fœtus;* and all the joints of the *fœtus* are much more flexible and moveable than they are in an adult: we see evidently the wisdom of the Creator in thus arranging the order of delivery by these bones yielding thus considerably in passing through the *pelvis*, so as to render the birth more safe and easy.

CHAPTER II.

Of the changes produced on the Womb by Impregnation &c.

SECTION 1.

The Gravid Womb.

The particular manner in which Pregnancy takes place has hitherto remained involved in obscurity, notwithstanding the laborious investigations of the most eminent Philosophers of all ages.—Although Pregnancy is not to be considered as a disease, and is a state which, with few exceptions is natural to all women, it is in general the source of many disagreeable sensations, and often the cause of Diseases, which might be attended with the worst consequences if not properly treated.

It is now however universally acknowledged that those women who have children, usually enjoy more certain health, and are much less liable to dangerous diseases than those who are unmarried or who prove barren. It however sometimes happens that some women breed with difficulty and are frequently indisposed during the whole time of pregnancy These indispositions may however proceed from the changes which necessarily take place on the impregnation of the womb &c.

In impregnation the womb suffers very considerable changes in size, shape, situation, and structure. These are very different in the early and latter months of pregnancy and therefore require a separate description.

In the early months, the size of the womb is not much augmented, for about the fourth month it is not so large as to be felt by applying the hand on the belly, its shape is chiefly altered at the bottom which becomes rounded, and rises considerably above the broad ligaments, between the fourth and fifth months its shape and size resemble pretty nearly an ordinary sized Florence flask somewhat flattened. Nor is

the situation of the womb during the early months materially altered, for it remains within the cavity of the basin till the fourth month, when it begins to ascend: Previous to this, from its increased weight, it sinks rather lower than naturally, and hence produces an irritation on the neighbouring parts, which explains some of the complaints during that period.

The structure of the womb in the early months is considerably changed, its *mouth* from a very short time after impregnation is closed up with a *glairy* substance, which prevents any thing from passing out of, or into it; this confirms the opinion respecting the impossibility of menstruation during pregnancy. And these discharges which have the appearance of menstruation during the first months of pregnancy* remain to be accounted for upon other principles.

The substance of the womb at this time becomes spongy at the bottom, and the blood-vessels which enter at that part are gradually enlarged in size, though they are not so large till after the fifth month as to be capable of admitting much blood.

After the fifth month the womb increases rapidly in size, and can then be felt plainly by the hand applied externally. Between the eighth and ninth month it is so large as to be twelve or thirteen inches in length, and eight or nine in thickness at its broadest part.

The shape of the womb in the latter months is somewhat oval, it acquires this form however by degrees: for till the sixth month, its neck remains as in the unimpregnated state; after that time it gradually becomes enlarged, and at last its former appearance is entirely obliterated

The broad ligaments remain nearly in the same situation which they possess in the unimpregnated state; for they are no higher than about three inches from the mouth of the womb, hence the greatest portion of that organ, at full time, is attached to none of the surrounding parts, and is therefore unsupported. The round ligaments, seem to be very much stretched in the latter months.

The situation of the womb after the fifth month varies considerably, it ascends by degrees as high as the pit of the stomach, at which it arrives little after the eighth month; and then it again sinks in such a manner, that immediately before labour comes on, in many cases, the belly appears quite lessened or flat. The changes on the neck, and on the situation of the womb, have been considered as marks by which the exact period of pregnancy can be ascertained, but as the neck undergoes more rapid changes in some cases than in others, and as the womb rises higher in first than in subsequent pregnancies, and varies also according to the shape of the woman, little dependance can be placed on such circumstances.—

When the womb rises as high as the pit of the stomach, it occupies nearly the whole cavity of the belly and by pushing the intestines behind and to the sides, it compresses them very much, which occasions many complaints at that period. —

The structure of the womb in the latter months is very different from what it was in the unimpregnated state. It is of a very lax

* Shaws Practice Part ii. page 475

spongy texture, easily torn; and hence there is the greatest necessity for the most cautious management during labour, otherwise the child under certain circumstances may easily be pushed through the substance of the womb into the cavity of the belly, an accident followed by the most alarming consequences.—The blood-vessels of the womb after the fifth month increase very considerably in size especially at one part; and therefore a discharge of blood from the womb after that period is always extremely dangerous, as the vessels are then capable of pouring out a very great quantity.—

SECTION 2.

Contents of the Womb during Pregnancy.

The child would be exposed to many hazards, in consequence of the various exertions which women must necessarily make during Pregnancy, were it placed in the womb without any defence. Nature has however provided a most beautiful apparatus for protecting it from such dangers.

The child when in the womb is included within a bag formed by three membranous layers, and is surrounded by a watry fluid, which prevents it from being affected by outward injuries—The outer of these layers, called by Anatomists *Chorion*, is thick and brittle; it is attached to the whole internal surface of the womb, and receives blood from that organ. The other two layers *amnion* and *allantois* seem to belong exclusively to the *fœtus* as they are found to envelope it in cases where it is contained within the womb. They are transparent and strong and have no visible blood-vessels—The liquor which is contained within those layers or coats, serve the double purpose of securing the child, as the acqueous humour does the crystalline in the eye from external injury, and when the membranes burst in the hour of delivery, it lubricates the *vagina uteri* which render the birth less difficult.—

One of these envelopes or membranes, *the allantois*, is by some authors said to be the substance vulgarly termed a *caul*, with which some superstitious parents are so strangely affected This circumstance is supposed to happen by the membrane having been suddenly divested of its liquor, in which case it shrinks and closes over the *fœtus*, sometimes but partly, and at others enveloping the infant almost entirely.

The child is connected with the mother by a thick spongy mass, which differs in size and shape in different cases, and which is termed, the *Placenta*, Cake, or After-birth. The cake lies between the *chorion* or outer, and the two inner layers (*amnion and allantois*) of the bag in which the child is contained: its surface next the mother is covered with the former, and its other surface with the latter. The external surface of the cake is very spongy and receives blood from the arteries of the womb which penetrate into its substance. The blood is returned to the womb by large veins, The internal

surface of the cake is quite distinct from the external; it is composed of a very great number of blood-vessels which divide into exceeding minute branches, interwoven with each other and with cellular substance. These vessels receive blood from and return it back to the child. The *placenta* or cake therefore, consists of two parts, which though intimately connected with each other, have a distinct system of blood vessels, for the one belongs exclusively to the mother, and the other to the child; and no blood has ever been proved to pass *directly* from the one to the other.*—The child is connected to the *placenta* by a cord called the *Umbilical cord* or *Navel-string*, which consists of two arteries, a vein and a quantity of *gelatinous* or jelly-like substance, covered by skin, the external part of which seems to be formed by the two internal layers of the bag containing the child. The *Umbilical cord* varies in length and thickness in different cases, one of its extremities is attached to the placenta, the other to the child. The former of these is fixed to no particular part of the after-birth in every case, for it is sometimes to the edge, but more frequently to some part between them. The latter is generally, except in cases of monsters, inserted into the middle of the belly of the child.—The arteries arising from the internal *iliacs* of the child come out at the navel, and carry the blood from the *fœtus* to the *placenta*, into which they plunge and ramify as already observed into minute branches. The vein, which in size is equal to both arteries, begins by its most minute ramifications in the placenta, and carries the blood from thence to the *fœtus*, entering likewise at the navel, it joins the *vena portarum* and *vena Cava*, and after sending a portion of the blood to the liver, conveys the remainder directly to the right ventricle of the heart: from hence a small portion is distributed by the pulmonary artery to the lungs, sufficient to keep them pervious; but as the *fœtus* does not breathe, and the lungs cannot expand, no more can pass that way: the *fœtus* is therefore supplied with a canal called *ductus arteriosus*, which arising from the trunk of the pulmonary artery, carries a large portion of blood immediately to the *aorta* or great artery; another portion passes through a hole in the *Septum* of the heart immediately from the right into the left auricle and from thence into the *aorta*, to be distributed into every part of the body: and again to be returned successively by the internal *iliacs* and the arteries of the cord to the *placenta*.

The blood of the mother, after having been duly prepared by her powers of digestion and respiration, is deposited in the cells of the placenta; whence it is absorbed by the veins of the *fœtus*, carried to the heart, and thence distributed to every part of the body for their nourishment and growth: having performed these offices, a large proportion of blood is sent by the arteries of the cord to the placenta, thence to be, absorbed by the veins of the mother, and carried into her habit to receive fresh supplies of *oxygen* and nutriment.†

Hence we discover the office of the placenta to be, to receive from the parent, and convey to the *embryo* nourishment and *oxygen* or that vivifying principles which all animals derive from the atmosphere —

* Hamilton on management of Females chapter, 3d - Section 2d, page 93.
† Bard's Compendium—Page 63.

SECTION 3.

Of the Positions of the child in the Womb.

The position of the child in the womb merits attention, as it explains the cause of some of the dangers to which women are sometimes exposed during parturition.

The substance by which the child is connected to the mother is not attached to any certain particular part of the womb: for it is sometimes fixed to the neck or orifice, but fortunately more often to the bottom or near it. During the early months of pregnancy, the child floats loosely in the fluid which surrounds it; but after it has increased to such a size as to occupy nearly the whole cavity in which it is contained; it is folded into an oval figure, so that it takes up almost the least possible space.—The Spine or back-bone is therefore bended, the head reclined downwards and supported by the hands, and the knees are drawn up towards the head.—One or the other extremity of this oval figure which the child forms, is commonly placed at the mouth of the womb, and in, by far the greatest number of cases, it is that made by the head; sometimes however the other extremity is in that situation. It happens also in very rare cases that the extremities are placed towards the sides of the womb; a circumstance which must render *delivery* difficult and hazardous.—The greatest diameter of the *fœtus* when naturally folded in the womb, according to M. Baudelocque is ten inches or thereabouts; and its smallest, which extends from one shoulder to the other, from four inches and a half to six at most. We must not however be contented with these general ideas of the child; we ought to make ourselves acquainted with the structure and dimensions of its principal parts and the motions they are susceptible of; we ought by the touch to be able to distinguish the different parts it may present at the time of labour.

M. Levret, a celebrated Accoucheur, who has long been regarded as eminent in his profession has advanced, that in the natural order after the fourth month of gestation, the child is generally placed with the head above, the breech below, and the belly forward; while in the latter months we find the contrary; that is to say with the head downward, the breech above and the back under the anterior part of the *uterus* or womb. This change of position has been termed by its advocates a *summerset*, and is said about the seventh or eighth month from conception, but sometimes later a considerable motion of the *fœtus* is felt in the womb; at which time it is generally turned (or makes its *summerset*) by the prevailing gravity of its head, or tumbled downwards with its face to the mothers back.*

Notwithstanding the respectable authority of the foregoing authors, the doctrine of *summersets* or a change in the position of the child in the womb is refuted by an author of great eminence,† who observes, that the strongest arguments we can use against the *Sum-*

* Shaws Practice Part 2d, page 486. † Baudelocque.

merset are founded in observation. The opening of dead bodies has a thousand times demonstrated that the childs head almost always occupies the inferior part of the cavity of the *uterus;* and it is generally the head which presents to the orifice in cases of premature delivery at whatever period of gestation it happens. If we have sometimes found the child placed differently, either in opening dead bodies, or in abortions, the proportion of these cases to those where the head presents, is nearly the same, as what we observe at full time Again, the *Summerset* is said to take place at about the seventh month, a period when we shall find the great diameter of the child, that is from head to breech longer than any of the transverse diameters of the *uterus*, consequently, cannot pass through them to effect the change spoken of—Therefore, both reason and experience join to prove, that there is no such *Summerset* as has been supposed; that the situation of the child varies continually in the first period of pregnancy; and that it becomes fixed and constant in proportion to its augmentation, except in those cases where the *uterus* contains an extraordinary quantity of water.—

SECTION 4.

Of the Divisions of the Child

As it respects labour or the delivery, the head of the child, of all the principal parts is the most solid and voluminous. Writers on Midwifery have been at the pains to subdivide the surface of the child with a view to the practice of this profession; among the most ingenious we shall borrow from the works of the celebrated *Baudelocque* who has reduced the parts to twenty three, which he however observes might be divided into thirty-four.

If the breast in its natural state appears larger in some directions than the head, its structure is such, that it always accommodates itself more easily to the mould of the *pelvis*. A similarity of structure obtains in the head by means of sutures, &c. by which the head is enabled to mould itself to the figure of the pelvis in some difficult labours. But it must be observed that when it diminishes in one direction, it almost always augments in another.

Although the childs head at the moment of birth, be somewhat of an oval figure, we may however distinguish in it five regions, two extremities, four diameters, and two circumferences. Of the five regions of the head, two form the summit and base, the three others the sides and the face.

One of its extremities is superior and posterior; we call that the *occipital* or *vertex* which is the crown or hind-head, the other is anterior and inferior which is the *chin*. The first is thicker and rounder, the second narrower and longer.

The largest diameter of the head, the length of which is usually five inches and a quarter, passes obliquely from the *symphisis* of the

chin to the posterior extremity of the *sagittal suture* at the top of the head. that is from the tip end of the chin to the most remote end of the crown of the head, and is called the *oblique diameter*. The middle or *longitudinal diameter*. which is about an inch shorter, extends from the middle of the forehead to the top of the *occiput* or hind head. The third or *perpendicular diameter* passes from the summit of the head to the base of the *Cranium;* and the fourth or *transversal diameter*. from one *parietal* protuberance to the other, that is the protuberances of the bones of the head parallel with the tops of the ears. The length of these latter is pretty constantly three inches and from four to six lines. It is proper to remark that the breadth of the head is less below the ears, than in the part indicated for the fourth or transverse diameter just mentioned, although many persons without giving themselves the trouble to examine it maintain the contrary.

The largest circumference of the head is nearly from thirteen inches and a half to fourteen or fifteen inches, the other is only ten or eleven. When the head lengthens in labour, it is always in the direction of the oblique diameter, so that the point of the cone which it then represents is above the posterior angle of the *parietal* bones: but it cannot undergo this lengthing, without diminishing in thickness from one side to the other and often from the summit to the base. These changes have limits however. which cannot without manifest injury be exceeded, they differ in different individuals, according as the head may be more or less *ossified;* the breadth of the Sutures or width of the *fontanelles* or as they are vulgarly called the *moulds*. They cannot therefore be precisely estimated. In some the *cranium* may lengthen with ease and safety six or eight lines; while in others the slightest change is injurious.

The most remarkable *Sutures* or openings in the *fœtus* are the *Coronal* or *Sagittal*, the *lambdoidal* and the *temporal* or *Squamous*. The *Sutura Coronalis* or coronal suture runs across the skull as it were from one ear to the other, across the top of the skull. The *Sutura Sagittalis* or sagittal suture begins at the hind-part of the head and runs across the *Coronal Suture* to the root of the nose, at the union of these two sutures or the place where they cross each other, there is a considerable opening which is termed the great *fontanelle* or *mould* of the head. The *Sutura Lambdoidalis* runs across the hind part of the skull nearly parallel with the ears. And the *Sutura Squamosa* or Temporal Suture is made by the wrapping of the upper part of the temporal and *sphenoidal* bones over the lower edges of the *parietal* bones. To these may be added the *Sutura Transversalis* or the Transversal Suture, this runs across the face through the bottoms of the orbits of the eyes.

The most considerable *fontanelle*, as already noticed, is at the union of the *Coronal* with the *Sagittal Suture*, it is called the *Bregma* or anterior *fontanelle*, its figure is nearly that of a lozenge. It was long believed to have a pulsation, but nothing of the kind exists in it before birth The place where the *Sagittal* and *lambdoidal* sutures join, is also called a *fontanelle;* though there is scarcely ever any membranous space in it as in the former. This *fontanelle* is called the *posterior*, and differs from the preceding in being formed of only

bony angles, and in being only as it were the point of union of three branches of *Sutures:* while the anterior is composed of four angles, and as many *Sutures* terminate in it, which makes them easily distinguishable by the touch. We sometimes, though very rarely, meet with a fourth angle in the *posterior fontanelle*, because the *occiput* is then divided into two; and in that case there are likewise four branches of *Sutures* which terminate in this *fontanelle*. Notwithstanding that, it differs so much from the former, that it is almost impossible to be deceived in it, even when we cannot touch them both to compare them. The learned Dr. Dewees, Lecturer on Midwifery, in his notes on Baudelocque, observes "I have seen two instances in the same family, where there were three complete *fontanelles* in the course of the *Sagittal Suture;* the additional one was between the two common ones, that is, in the middle of the parietal bones."—The articulation of the head with the *trunk*, its natural situation and motions are not less necessary to be known. The first is a species of *ginglymus* which permits but very small motions, either forward, backward, or on the sides; if the head executes greater, they depend on the combined motion of all the *Cervical vertebræ* or the *vertebræ* of the neck.

These motions are freer in the *fœtus* than in the adult; but they have their limits, which cannot be exceeded without danger to the child; the pivot-like motion especially which depends almost entirely on the twisting of the neck, cannot with safety be made to exceed a quarter of a circle. The natural situation of the head of the *fœtus* is such that the chin is lower than the *occiput*, which makes the axis of the *trunk* pass a little before the *posterior fontanelle*. The composition and motions of the *trunk* and extremities, are also essential to be known, as they have their direction and limits also. As the head cannot with safety be made to rotate more than a quarter of a circle, when we suppose the body the fixed part in the *pelvis*, so also, the *trunk* cannot be made to exceed this without injury, when the head is supposed to be the fixed part. The fundamental principles of midwifery may be perceived, by comparing the principles thus far established between the *pelvis* of the mother and the child to be born. We learn from them that delivery can only be effected by having the *occiput* or hind head behind one of the *acetabula*, and the fore-head before one of the *Sacro-iliac symphises* of the other side. It must descend so that the *occiput* may turn under the arch of the *pubes* or share-bones, and the forehead into the hollow of the *Sacrum;* while the shoulders are to make similar turns through the different *straits*. In those cases where the feet, knees, or breech present, the shoulders and head must present their largest diameters to the largest diameters of the *pelvis*, &c.—

CHAPTER III.

Of Female Diseases.

SECTION 1.

Of the Menstrual Discharge.

Every woman believes that her health and capacity of becoming a mother depends upon the regularity of the monthly discharge. She has great reason for this opinion, at the same time it may be confessed, there occurs great variety in this respect between different women; and that every deviation from the common standard in the same individual so far from being justly considered as the cause of the ill health which generally accompanies it, ought more frequently to be considered as the consequence; and that the preceding impaired state of health is generally the cause of the irregularity in menstruation. All attempts therefore, to relieve such irregularities ought to be directed to alter and change the state of general health; and much harm has been done, particularly in consumptive and other cases of great weakness, by attempts to force this evacuation at a time when nature is unequal to it, and when the remedies employed are often very injurious.—Mothers with equal reason are anxious for their daughters about the period of their first menstruation, as their future health may greatly depend upon the happy establishment of this change in their constitutions: But in this instance also, it should be known that success depends upon general health; and consequently upon their treatment of their girls in infancy, and during their education from early childhood. According as that has been well or ill conducted, perhaps in exact proportion, as they have been confined to a plain and simple diet; as they have been indulged in constant and free exercise in the open air; as they have been restricted from all weakening habits, sedentary occupations, indolence, soft beds, and late hours in or out of bed; will they pass happily through this critical period of their lives; or otherwise.

It is the duty of mothers, and those who are intrusted with the education of girls to instruct them early in the conduct and management of themselves at this critical period. False delicacy, or false modesty, inattention and ignorance of what is beneficial or hurtful at this time, are the sources of many diseases and misfortunes in life, which a few sensible well timed lessons from an experienced matron might have prevented. Nor is care less necessary in the subsequent returns of this discharge. Taking improper food, violent affections of the mind, or catching cold at this period is often sufficient to ruin the health or to render the female ever after incapable of procreation.—

The confinement of females, besides hurting their figure and complexion, relaxes their solids, weakens their minds and disorders all the functions of the body. Hence proceed obstructions, indigestions, flatulence, abortions and the whole train of those disorders termed *nervous*. These not only unfit women for being mothers and nurses, but often renders them whimsical and ridiculous. A sound mind depends so much upon a healthy body, that where the latter is wanting, the former is rarely to be found.—

Females generally begin to menstruate about the age of fifteen and leave it off about fifty, which renders these two periods the most critical of their lives—These may be considered as the periods peculiar to European climates: but in the warmer climates and even in South-Carolina, they are known to commence as early as thirteen, and in some rare instances at twelve, and terminate at forty-five. About the first appearance of this discharge the constitution undergoes a very considerable change, generally indeed for the better, though sometimes for the worse. The greatest care is now necessary, for if a girl about this time of life be confined to the house, kept constantly sitting, and neither allowed to romp about, nor employed in any active business which gives exercise to the whole body, she becomes weak, relaxed, and puny, her blood not being duly prepared, she looks pale and wan, her health, spirits and vigour decline, and she sinks into a valetudinarian for life.

A lazy, indolent disposition, proves likewise very hurtful to girls at this period. It is seldom we hear of obstructions among the more active and industrious part of the sex, these are principally confined to the former, who are also in a manner, worn out with *chlorosis* or the green sickness and other diseases of this nature. Unwholesome food, strait clothes, and above all monstrous improprieties in dress. Nothing exceeds that most baleful habit of *corsets* and stays—Fond of a fine shape, young females foolishly imagine that this can be acquired by lacing themselves tight, and regulating their shape by those abominable girths or surcingles. But they are little aware that from this pernicious practice, themselves and their female posterity, if ever they are so unfortunate as to bring one into existence, will feel the dire effects of a practice, than which, human invention could not possibly have devised one more destructive to health. Since by compressing the stomach and bowels, they not only retard the regular growth of the body, but hurt the digestion and procure for themselves oft-times incurable maladies. When girls who are of a robust, florid and healthy appearance, begin at the ages of thirteen to fifteen to complain of flushings, head-aches and general uneasiness; they may suspect that the commencement of the first critical period is about to take place, they should therefore observe a spare diet, consisting chiefly of vegetables, should keep their bowels open with a little *Rochelle Salts and Senna* or occasionally a dose of *Castor Oil*. They should use moderate exercise; and carefully avoid all such as is violent, particularly in crowded and heated rooms. They should also avoid the extreme passions of the mind, especially anger. They should for two or three months, for a few evenings before the expected appearance of the menses, bathe their feet and legs in blood warm water. This course properly persisted in usual-

ly proves advantageous.—Relaxed and feeble young women who are much more subject to such delays in the first appearance of the menstrual evacuation, should use constant exercise in the open air, particularly riding on horseback, they should use the cold bath, and especially to have sparks drawn from them at an Electrical Machine. These, together with such remedies as tend to strengthen the habit in general should be adopted for this purpose. Wine Bitters, such as are recommend in the appendix to this work, under the articles *bitter wine and stomach wine*, *page* 448; also mild preparations of *iron* commonly called steel dust, together with a few aloetic purges, particularly such as are described under the head of "*Purging Pills*" in the appendix, page 438, and occasionally intervening a few doses of Rhubarb and Calomel.—Last, though not least of all, we strenuously recommend to females sprightliness and good humour as they value their own health and the health of their desired offspring. It is an absolute duty they owe to themselves and their posterity. Youth is the season for innocent mirth and cheerfulness, let it therefore be indulged. To lay in a stock of health in time of youth, is as necessary a piece of prudence, as to make provision against the decays of old age—While therefore, wise nature prompts the happy youth to join in sprightly amusements, let not the severe dictates of hoary age forbid the useful impulse, nor damp with serious gloom, the season destined to mirth and innocent festivity.

SECTION 2.

Obstruction and Suppression of the Menses.

Definition.—When such women as are neither in years, pregnant, nor capable of giving suck, have their menstrual discharges at longer intervals, or less copiously than usual, those discharges are said to be obstructed: But totally suppressed if no signs thereof appear at the expected periods or intermediate spaces.—

Cause.—This particular obstruction or suppression may proceed from a viscidity or lentor in the blood, or tenacity of the vessels; as likewise from a plethora brought on by catching of cold, an obstructed perspiration, or the being exposed to the cold air, drinking of cold water, &c. Long and severe distempers, sudden fear, the increase of other evacuations, or hæmorrhages, too astringent medicines, and violent exercise, together with the various causes enumerated in the foregoing section, may give rise to this disorder.

Symptoms.—When the menses are either partially or totally suppressed, there frequently happens some hæmorrhage or other, as a bleeding at the nose, a spitting or vomiting of blood. There is also a pain in the head, loathing of the food, attended at times with an unnatural desire of feeding on such things as are hurtful or unfit for nutrition. A *Cachexia*, the *fluor albus* or whites, fainting, a quick and low pulse dulness and sinking of the eyes, a lingering hectic

fever, a cough and difficulty of respiration, watchfulness, palpitation of the heart, *vertigo* or swimming in the head, hysteric fits, and sometimes a tense pain about the womb. With time the symptoms increase, with a swelling and hardness of the *abdomen* or belly, the thighs, legs and feet, the urine appears red, bloody, and proves small in quantity; and in cases greatly protracted, now follow anxiety, grief, despair, great thirst, pain in the spine or backbone, dropsy, &c

Medicine.—From whatever cause this flux is obstructed, except in the state of pregnancy, proper means should be used to restore it, for this purpose sufficient exercise in a dry, open and rather cool air, should be used: cheerful company and agreeable amusements act as so many auxiliaries to medicine —

If the obstruction proceed from a weak and relaxed state of the solids, the preparations of bark, with other bitters; wine, in which the filings of iron have been infused, or prepared steel itself may be taken in molasses or honey to the quantity of half a drachm three or four times a day, bleeding in these constitutions would prove rather hurtful.—But if the obstruction proceed from a viscid state of the blood; and in women of gross or full habit, evacuations and such medicines as attenuate the humours are necessary—bleeding in this case is admissible, particularly if the case is obstinate, and the symptoms increase. The feet and legs should be bathed in warm water frequently, and the diet should be thin and spare, aloetic pills may be taken provided they do not produce the piles, which they are very apt to do in some constitutions.—A tea-spoonful of the Tincture of black Hellebore may also be taken twice a day in a little water or Pennyroyal tea —

Should the obstruction continue notwithstanding this treatment, the patient should, about the expected period of their appearance, take at night a bolus made of fifteen or twenty grains of Calomel with the Conserve of Roses, and the morning following about twenty grains of Jalap combined with the same quantity of Vitriolated Tartar—

When obstsructions proceed from affections of the mind, as grief, fear, anger, &c. every method should be taken to amuse and divert the Patient; a change of situation often produces a happy effect, and a soothing, kind and affable behaviour to females in this situation, is of the last importance. This together with the treatment already laid down, according to the particular constitution and habit of the Patient, will seldom fail to remove the obstructions from whatever cause they may have originated.—

SECTION 3.

Immoderate flow of the Menses.

When the Menstrual flux either continues so long, or proceeds so fast, as to prove prejudicial to the patient, tis said to be immoderate: and may have for its causes, a plethoric habit, a laxity of the

uterine vessels, an increased motion, or a great thinness of the blood; and most frequently happens to women about forty-five or fifty, and who indulge in ardent spirits.—A continuance of this disorder occasions a loss of strength and appetite, a pale complexion, cachexy, swellings in the feet and ancles, dropsies, and sometimes consumptions.—

To restrain the flux the Patient should be kept quiet and easy both in body and mind. If it be very violent, she ought to lie in bed with her head very low, to live upon a cool and slender diet, and to drink freely of a decoction of Comfrey-roots with Port Wine. Bleeding is sometimes necessary, by way of revulsion, if the strength of the Patient will allow of it. The following powder will be found serviceable in restraining the flux. *Take two drachms of alum and one of Japan earth, reduce them separately to a fine powder, then mix them uniformily and divide the whole into eight or nine doses, one of which to be taken three times a day.* Half a drachm of the *Tincture of Peruvian Bark* may also be taken four or five times a day with ten or fifteen drops of the *Elixir Vitriol* to each dose. *Laudanum* taken in doses of ten drops four or five times a day has its use, provided the habit be not very costive—In warm weather the cold bath will be of considerable service; indeed in desperate cases and in the depth of winter, cold applications of cloths seven or eight double, wrung out of vinegar and water, have been successfully used to the lower abdomen, and ligatures made pretty tight above the knees have contributed greatly to check this disorder.—One of the strongest and most effectual astringents we know of in this case, is the *Acetite of Lead* commonly called sugar of lead; this in small doses of from three to five grains taken at proper intervals, will seldom fail to stop this flux, but we would advise the patient, whenever it is practicable, previous to its indiscriminate use, to consult a Physician.

SECTION 4.

Of the Fluor Albus or Whites.

This uterine *Fluor* is a copious and continual flux of a matter from the *vagina uteri* after the manner of the Menses, or rather *a gonorrhœa virulenta.* It is supposed to proceed from a relaxation of the glands of the womb and *vagina* which ooze out a white viscous matter, too plentifully. It is sometimes caused by falls, sprains in the back, or an obstruction of the Menses. It may also be the effect of the venereal disease, which though cured, yet leaves the glands of the *uterus* and *vagina* in the relaxed state just mentioned.

Symptoms.—Full grown women as well as such as are young are subject to this distemper. The quantity of the running increases upon violent exercise, straining, &c. When the disease is moderate

the discharge is whitish and of a good consistence, coming away without pain: yet when it is of long continuance its colour proves variable. being sometimes white mixed with yellow, at other times it is of a thin watery consistence, of a greenish colour inclining to black, sharp, corroding, fœtid, and occasioning heat of urine, ulcers, and most of the symptoms peculiar to the venereal disease.—If however the flux cease during the time of the Menses, and return again after that is over, the case is commonly deemed not venereal but barely the whites.—These symptoms continuing to increase, will occasion obstructions, dropsys, consumptions, &c. &c.

To remove this disease the Patient must take as much exercise as possible without fatigue. Her food should be solid and nourishing, but of easy digestion—Sago, and strengthening jellies made of the shavings of Hartshorn, or a quarter of an ounce of *isinglass* dissolved in a pint of milk and sweetened with sugar should be taken every morning—Her drink may be red wine mixed with lime-water—Sometimes a milk diet alone will perform a cure.—

Medicine.—There is perhaps no article of Medicine more valuable in this disease than the Peruvian Bark, which in this case should always if possible be taken in substance. If however the stomach rejects the bark in substance, the following tincture may be given in doses of a tea-spoonful three or four times a day in a glass of Port or Claret. Take of the best Peruvian Bark four ounces. Japan Earth three ounces. Gum Kino one ounce. Bruise the ingredients, and add to them two pints of Proof Spirit, or of old Madeira, let them digest in the Sun, frequently shaking them for eight days, and decant for use.—In warm weather the cold bath will be of considerable service.—

The Furor Uterinus and *Chlorosis or green-sickness*, depending particularly on the state of the Patient, and being an increased Hysterical affection—they are referred to that head, page 289.—

CHAPTER IV.

Of Pregnancy and the Diseases Incident to that State.

SECTION 1.

Signs of Pregnancy.

The signs of Pregnancy may be divided into those of the early and those of the latter months. The first circumstance which renders Pregnancy probable, is the suppression of the periodical evacuation, which is generally accompanied with fulness in the breasts, headache, flushings in the face and heat in the palms. Some weeks after pregnancy the belly becomes flat from the sinking of the womb as noticed in Chap. I. and hence drawing down the intestines along

with it. These are not however unequivocal signs of pregnancy, as suppression, and an enlargement of the womb from any other cause will produce the same effect. Many women soon after they are pregnant become very much altered in their looks, and have peculiar irritable feelings, inducing a disposition of mind, which renders their tempers unpleasant, and incites a propensity to actions, of which on other occassions they would be ashamed.—In such cases the features acquire a peculiar sharpness, the eyes appear larger and the mouth wider than usual, the breasts begin to swell, grow hard. painful, and contain a little milk. The nipples also become larger, firmer and darker coloured, a yellowish livid circle appearing about them; the eyes in some seem sunk and hollow, with the whites dull and thickish. Tis reckoned a sure diagnostic of pregnancy if, upon examination, the orifice of the womb proves to be exactly closed, while the body thereof is equally distended, in proportion to the time elapsed from the first suppression of the menstrual flux, but especially if the neck thereof feels prominent, and pointed like the stalk-end of a pear, but flattens gradually and at length subsides, or as it were becomes one with the round body of the womb itself; though this will not happen till near the time of delivery. Although, from the similarity of symptoms produced by suppression from causes other than pregnancy, there are during the early months no unequivocal signs by which we can be assured in the general, yet to those more particularly conversant in these affairs the following marks may serve to direct the judgment on those occasions. The progressive increase of the belly along with suppression; and in some instances even along with a continuance of the menstrual discharge in less quantities during the first three or four months, and the progressive symptoms together with the sensations of quickening at the proper period, afford the only true marks of pregnancy. Besides these, another symptom appears in the latter months, which when preceded by the usual ordinary signs, renders pregnancy certain beyond a doubt; it is the presence of *milk* in the *breasts*. Conformably to the ancient method of ascertaining by the *Touch* the true state of the womb during pregnancy. M. Baudelocque says, the body of the womb forms a kind of globe felt by the finger introduced into the *vagina* and which may be distinguished by the other hand applied externally above. The *os pubis*, is regular in its surface, and has a sort of supleness, about the seventh month the neck of the womb growing still shorter becomes less accessible to the touch, since it recedes from the *vulva*, when this proves to be the case, and most of the symptoms accord with what has been already described, we can scarcely err in pronouncing it a true case of pregnancy.—There are no certain signs to inform us whether a woman goes with a boy or girl; only the former is said to be more restless in his confinement than the latter. Some Midwives pretend to ascertain this fact by causing the anxious mother to milk a drop or two of milk in a glass of water if the milk swims, tis pronounced a boy! and *vice versa*. Nor are there any certain signs to inform us whether a woman goes with more than one child; some however form a judgment hereof from the uncommon magnitude of the *abdomen* when there is no dropsy suspected: and from a depressed line which they say is discoverable

along the middle of the *abdomen* with a prominence on each side thereof, and particularly when the woman feels various motions on both sides of her.—When more than one child is contained within the womb, each is included in its own proper membranes, and is attached to the mother by a cake peculiar to itself. In many cases however the cakes are continuous to, or blended with each other; but the navel string which belongs to each child, points out the distinction between them, and proves that a single cake cannot serve two or more children. In some rare cases the blood vessels belonging to the child of each cake communicates with each other: hence a particular precaution in the management of *twins* or of *triplets* becomes the more necessary.—

There are some circumstances which induce symptoms resembling those of pregnancy which it may be necessary to point out. These vary much in their nature, for some are occasioned by morbid effects on the uterine system, which are sometimes the consequences of pregnancy; some originate from diseases affecting the womb, and others occur merely from the natural change at the decline of life.—After impregnation, the child in its original minute state passes from one or other of the *ovaria* along the corresponding *Fallopian tube* into the womb. Sometimes however, the child remains in the ovarium or tube, or falls into the belly and nevertheless is nourished, and increases in size for a certain time. These cases are termed *extra-uterine conceptions*. These cases resemble the natural ones for the first four or five months, after that time the breasts lose their enlarged appearance and become flaccid; the belly no longer increases in size, and a weighty and cold sensation is felt on the side where the conception was deposited—the usual time of pregnancy elapses without any symptom of labour. At length, in some cases inflammation takes place, which unless favoured by suppuration and procuring an outlet for the confined conception must terminate in death.—There have been instances where the extra-uterine child has remained without exciting very disagreeable complaints for many years. Every disease which, affecting the womb, tends to increase the size of that organ, or any of its appendages, produces symptoms, which for the first three or four months, nearly resembling those of pregnancy. Such are collections of blood, or hydatids or tumors in the womb, and dropsy of the *ovaria*. These may be distinguished from pregnancy by the symptoms peculiar to themselves, and which are described in other parts of this work. Another circumstance by increasing the size of the womb, may cause symptoms like those of breeding, is, the presence of what is called a mole or blighted conception in the womb. The last case is the existence of a fluid in the breasts resembling milk, which fluid may originate from a mechanical pressure of the breasts or from some particular disease; hence some women have been led into error from this circumstance and concluded themselves pregnant, and have not been undeceived, until they have passed the time of pregnancy according to the known laws of nature.—

SECTION 2.

Diseases Incident to Pregnancy.

The irritability occasioned by the change produced on the womb, is the cause of many disagreeable complaints in the early months, although these are seldom immediately dangerous, yet if neglected may occasion the loss of the child, and lay the foundation for a train of disorders which may materially affect the health of the mother ever after: we shall endeavour to consider these distinctly under the following heads —

1 *Sickness and Vomiting.*—The most healthy women are as much subject to sickness and vomiting during the early months of pregnancy, as those who are weak or delicate In the latter it is attended with great weakness and languor, with a disposition to sweat on using the most moderate exercise, or during the night, the two cases require a different mode of treatment.—In the former when sickness and vomiting is attended with violent strainings, bleeding at the nose, pain or giddiness in the head, flushings in the face, increased heat in the palms of the hands, with other symptoms of fulness and disturbed rest, blood letting, together with opening the bowels, and a spare diet, afford the greatest relief. In weak and delicate women bleeding is improper; a light nutritious diet, with the moderate use of wine, and small doses of stomachic-bitters should be taken every day during the early months. If the stomach is disordered and the tongue furred, with an ill taste in the mouth, the breath disagreeable and attended with frequent belchings, the stomach should be emptied or cleansed with fifteen or twenty grains of Hippo —If notwithstanding this treatment the reachings continue so violent as to disturb rest in the night time a gentle opiate may be given along with some proper stomachics—after which, recourse may be had to the *Saline Julep* mentioned in the appendix—of which a spoonful may be taken now and then and repeated as occasion requires—a plaister of opium with camphor applied to the pit of the stomach will sometimes relieve when other things fail.—

2. *Heart-Burn* —That uneasy sensation of the stomach commonly called heart-burn, though commonly confined to the early stages of pregnancy, sometimes accompanies it throughout. This affection is produced from the same causes with the former, only in a less degree, and when attended with a sour taste in the mouth and acid eructations it indicates the cause to be acidity—Magnesia is recommended as one of the mildest absorbents, which together with its gently laxative property makes it one of the most suitable medicines for this complaint. Prepared chalk, or lime-water afford also relief. The bowels should be kept soluble, gross food of every kind avoided, and the stomach should never be overloaded.—Perhaps one of the most agreeable palliatives which could be offered in this case as well as all others produced from acidity on the stomach, will be the following medicated cake. Take one pound of the finest wheat flour, half a pound of fresh butter, half a pound of sugar previously

combined with a pint of milk, and a large tea-spoonful of Salt of Tartar, dissolved in a small quantity of water, let the whole be carefully kneaded together, and then rolled, and formed into thin cakes, which must be exposed to a brisk heat, these are soon done, and may be eaten at pleasure whenever the heart burn is troublesome, and particularly at eleven o'clock each day

3 *Longings.*—When the mother longs for any particular thing, she appears pensive dejected and restless; upon being asked the meaning thereof, she generally confesses it, and often of her own accord, without entering into the merit of the different opinions on this subject; Authors of the utmost reputation have agreed, that it is safest, to grant the immediate indulgence of the thing longed for, unless it is evident that the indulgence might be attended with consequences more disagreeable than a denial—and on this point it might be necessary to remark, that the consequences of a disappointment in the irritable state of early pregnancy, might induce passions of the mind which would be productive of many disagreeable consequences.—

4 *Syncope and Faintings*—Many women are subject to these complaints during the early months and especially about the period of *quickening*. They are merely temporary sypmtoms, and are seldom of bad consequence, unless frequent, violent and of long continuance; and then they may endanger abortion or miscarriage. If the patient be *Plethoric*, that is, labouring under a fulness of blood, and is subject to Syncope, it is proper to bleed, and put her upon a spare diet, having care also to keep the bowels open If on the contrary the patient is weak and delicate, bleeding is not so proper, but the patient may take frequently from 20 to 30 drops of the Tincture of Saffron, or of the Spirits Selvolatile or Red Lavender combined, if attended with restlessness a paregoric draught may be exhibited at night, or a gentle opiate. In the fit it will be proper to apply *Volatile Salts* or Hartshorn to the nose, and generally to allow a free circulation of air—variation of scenes, cheerful company, and moderate exercise in the open air will frequently prevent the recurrence of this affection.—

5. *Diarrhœa* or a disordered state of the bowels, causes great weakness and endangers abortion. Sometimes it is simple and not attended with much pain when this is the case, and the stomach is not disordered, gentle doses of Rhubarb and Magnesia will generally remove it, but if the stomach be foul, it will be necessary, previously to cleanse it with a dose of Hippo: If the Diarrhœa be joined with, either a *Lientery* or discharge of the aliments crude and indigested, or with a dysentery, and frequent though ineffectual inclination to stool, it may, if neglected be attended with serious consequences. Hence it is of importance to endeavour to correct the state of the bowels, by giving first gentle doses of Castor Oil, to each of which may be added from five to ten drops of Laudanum. When this has occasioned a respite, thirty grains of Hippo may be divided into six parts and one taken every hour or two. in a little Cordial Cinnamon water. Clysters of thin starch, with fifty or sixty drops of Laudanum may be also administered, and repeated with

great safety. The patient through the whole course having regard to a suitable diet.—

6 *Costiveness*.—The *fœtus* or child compressing the intestines, is apt to occasion a costiveness in the mother especially toward the end of the reckoning. If this habit is indulged in, it may endanger abortion, whenever therefore it produces, pains in the head, uneasiness in the bowels, or a retching to vomit, the patient should immediately have recourse to Castor Oil, or an infusion of Senna, Salts, Manna and stewed Prunes. If the excrements are hardened, in the intestines, Clysters of Mutton Broth may be administered frequently until the intestines are emptied.—

7 *Swelling and pain in the breast*.—These being produced by the natural changes incident to pregnancy are only symptomatic, and are seldom of ill consequence. In this case all that is necessary to be done is to keep the breast lightly covered with soft fur or thin flannel, if however they are so painful as to render the patient uneasy, a little warm Olive Oil should be gently rubbed on the breasts evening and morning, and the flannel applied as before: but should they inflame, rise and threaten suppuration, the patient should be bled, and a few gentle purgatives be given until these symptoms vanish, or should they degenerate into other disorders, they must then be treated accordingly.—

8. *Pain in the back, loins and hips*.—The weight and pressure of the child, together with the distention of the ligaments, are very apt to cause a heavy painful sensation in the small of the back, hips and loins. When it happens naturally or without any strain or other external injury, tis never dangerous; but when from violent motion or the like it may cause abortion and even prove mortal. If attended with fever, a vomiting or the hiccup, &c or if it proceed from external injuries, rest ought to be indulged and the patient confined to her bed; bleeding soon after the injury was received may greatly conduce to the cure, a gentle sweat may be next administered, a strengthening plaister applied to the region of the loins, and in case of restlessness, opiates may be given occasionally. If the pain proceeds merely from the weight or pressure of the child; the *abdomen* ought to be supported and kept up by a proper bondage or large Swathe fitted for the purpose —

9. *Swelling of the legs and thighs*.—In consequence of the obstruction to the return of the venal blood back to the heart, caused by the pressure of the child against the vessels, a swelling necessarily ensues, and more particularly in these parts, because they are dependant, because the circulation is but languid towards the extremities of the body, and because, that a *plethora* is induced by the stoppage of the *menses*. These swellings are *œdematous* or pit upon the pressure of the finger, are seldom of ill consequence and always subsides after delivery. If however the swellings prove very considerable, the legs should be placed in a horizontal position as frequently as possible, and warm fomentations of Mullen, Elder, Wormwood or Lavender leaves, to which a little Vinegar is to be added, may be used frequently.—Moderate easy exercise, and gentle dry frictions with the flesh-brush or flannel and keeping the bowels open, will afford certain relief if duly persisted in.—

10. *Cramps of the legs and thighs*, are sometimes an attendant on the last complaint just described, require friction with dry flannel or a flesh brush, or the application of the Anodyne Balsam, Opodeldoc, or Ether. Some wear a roll of Brimstone, which they apply immediately to the part with success.

11. *Suppression of Urine.*—This complaint is always to be considered as capable of producing the worst consequences if neglected; for besides laying the foundation for future disorders; if labour should come on during suppression of urine the bladder might be irreparably injured, here then, if the assistant is ignorant of the use of the Catheter, as hinted at in Chap I Sect. iii. It is necessary to have recourse to a skilful practitioner So that the waters may be drawn off in time to prevent farther danger.—

12. *Incontinence of Urine.*— This is a most disagreeable complaint, as it keeps the patient always in a most uncomfortable state. It is however moderated by indulging in a horizontal posture; and its disagreeable effects remedied by the most scrupulous attention to cleanliness and the use of a thick compress of linen or a proper sponge. If the pressure of the child is great, the patient should lay supine and be confined to her bed for a time, and the abdomen should be suspended by a swathe, and where the urine is acrimonius and stimulating, cooling emulsions with gum-arabic, should be drank of freely and a cool slender diet ordered, and if the skin should be excoriated, the parts should be first washed with fair water and afterwards with weak lead-water.

13 *Cough and difficult Respiration* —The womb rising very high in the stomach presses on the *Diaphragm* or Midriff, prevents the free expansion of the lungs, from the want of space occasioned by this pressure, and hence excites difficulty of breathing; and as the blood is impeded in its circulation though the lungs, an irritation is produced which excites the cough. Therefore these complaints cannot be removed till the size of the womb is diminished, nor can any permanent relief be expected till delivery. In order however to obviate somewhat of the force of this affection, some use bleeding, with opening Medicine, and recommend a proper posture when in bed, half sitting and half lying —

14. *Convulsions.*— Those habits which are much exhausted from profuse evacuations, or which are supplied with a larger proportion of blood than usual in time of pregnancy are, particularly from the latter cause, subject to convulsions, in which case the life of the patient is always to be considered in the most imminent danger— The first thing necessary to be had is a judicious physician, and until such assistance can be procured; the patient must be exposed to a free circulation of air, and if fulness, should loose from eight to twelve ounces of blood, and have her bowels opened by the repeated exhibition of purgative clysters These things ought not to be neglected, since they have been found to retard the progress of the disease until the assistance required has been procured.—

15. *The Piles* —These are a painful and troublesome complaint at any time but especially in pregnancy Persons labouring under these must pay attention to the state of the bowels, by taking gentle doses of opening medicine if costive, such as the Lenitive Eelectuary,

to which may be added Flour of Sulphur in small doses. If the case is obstinate the remedies must be the same as those recommended. page 229, *Domestic Med.*

16. *Discharge of blood from the Womb.*—It has already been observed, that in the natural state of pregnancy, no discharge of blood can take place from the womb and be common. Every appearance therefore of blood in the pregnant state ought to be considered as a certain indication that something *uncommon* has happened.

Authors of great reputation have considered those discharges, as a continuance of the menstrual flux, and hence we find in most works of former writers a section appropriated to that subject, late experience has proved however that this discharge proceeds sometimes from the passage to the womb, or from that organ itself, and as no bad effects can result from the former, during the early months, the case has been deemed merely a continuance of the menstrual discharge, only in a smaller quantity. In the latter case where the discharge is from the womb itself the most disagreeable consequences may ensue.—If the patient be without fever, or an increased action of the blood-vessels, or violent agitation of the body, and discovers after walking or standing for a considerable time, a small discharge of blood attended with a trifling pain at the lower part of the belly; this discharge may be concluded to proceed barely from the passage to the womb, and is readily obviated by a short confinement and a horizontal posture, and afterwards avoiding much exercise or a too long continued erect position of the body. When however the appearance of blood is preceded by, or accompanied with flushings of the face, and heat in the palms of the hands, with much thirst, pain of the back loins or lower part of the belly, it is then to be considered as proceeding from the womb itself, and is by some authors termed a *flooding before delivery* Here the life of the patient as well as that of the child are in imminent danger unless the discharge be readily stopt. To effect this the patient should be placed in an airy bed-room, secluded from company, and have her mind rendered tranquil, the body easy, her diet should be strengthening, and Balsamic, the medicines may be such as are recommended for an immoderate flow of the menses.* The patient may also take a drachm of prepared red coral twice a day in a glass of Claret or of the Tincture of red Roses—her drinks should be almost *cold.* Cloths wet with cold vinegar and water applied to the lower part of the belly have been attended with great success. If however the flux continues immoderate, an abortion is likely to ensue, in which case it were advisable to call in a Skilful Physician, who may then either combat the disorder, or be at hand to render such assistance as the encreased urgency of the case might demand.—

* Chap 3, Sect. iii

SECTION 3.

Abortion or Miscarriage.

By *abortion* or *miscarriage*, is meant the expulsion of the child at any period when it cannot live; it must therefore happen during the first six months of pregnancy It is needless to enumerate the causes which lead to this accident, they are numerous, and as in the rules or advice to mothers contained in this edition, this subject is extensively handled. we shall only enumerate in this section the symptoms of approaching abortion, with the proper mode of procedure necessary for its treatment.

The symptoms of abortion are almost as various as the causes, nor do they appear in the same succession in every case The following are among the most prominent, the sudden and unaccountd succession of regular breeding symptoms, before the period of quickening, sense of weight and coldness in the lower part of the belly—a flaccidity of the breasts, or the same symptoms at an time after quickening. Pains in the loins, back, and lower part of the belly, bearing down, with regular intermissions and discharge of blood from the womb; and when the time of miscarriage is at hand the pains are much the same as those in labour, are felt principally about the *os-pubes*, the patient becomes fainty, a *serous* humour oozes from the womb, upon which follow the efflux of waters, flooding, &c.

Upon the first appearance of any of those symptoms of abortion, the patient must be put to bed, the passions of the mind are to be kept calm and moderate, her food regulated to the particular symptoms and state of the stomach and bowels, and if she is of a gross or full habit she ought to be bled in the arm—after which, astringent boluses, as described in the appendix may be given every three or four hours, and generally the case is to be treated as the immoderate flow of the menses,* or as the *discharge of blood from the womb* in the preceding section. If however the discharge of blood continues considerable the patient had better have recourse to the assistance of an experienced practitioner, and here, although it is not presumed that these always succeed in preventing abortions, still their knowledge of the disease, and its appropriate remedies, together with the advice for the subsequent treatment of the patient and the course to be pursued in order to prevent a recurrence of the same misfortunes to which women after a first miscarriage are ever after liable, renders their assistance in this case absolutely necessary.—

* Chap 3, Sect. iii

SECTION 4.

Of Moles and False Conceptions.

A Mole is defined a lump of fleshy matter destitute of bones, joints and limbs of no certain figure, generated in the womb, by the joint concurrence of both the sexes, but without a *placenta* and umbilical cord, and adhereing closely to the womb, from whence it receives its nourishment, being usually included in a membrane, interspersed with various vessels.—They are supposed to proceed from some violent force, or external injury received after conception, whereby the tender rudiments of the *fœtus* are crushed or blended together in one common and undistinguished mass of flesh, which cannot be readily discharged out of the *uterus* whose orifice is closed upon conception. The miscarriage of a mole about the second month, is usualy termed a *False Conception.* When a woman goes with a mole, the abdomen is harder, sorer, and feels heavier than when she goes with quick child. She is seldom free from pain, and when the mole grows large, upon turning herself in bed, she feels as it were a dead weight, or a heavy lumpish matter roll and fall from side to side, the breasts also do not swell up in this case as when there is a real child, and contain, if any, but little milk. The colour of the face fades or looks more deadened, and the patient is frequently much more disordered in going with a mole, than with a live child. If to the signs bovementioned there be added also this, that after the fourth or fifth month of her reckoning, she finds no motion, nor feels no strugglings within the *uterus*, there is great room to suspect it no real conception. And the thing will be past all doubt if the signs hitherto mentioned remain the same, long after her time of reckoning is expired.—

False conceptions are always esteemed less dangerous than moles; yet a miscarriage of this kind may prove of worse consequence, than the miscarriage of a *fœtus;* because in the former case, the flooding is usually more violent and of longer continuance. Women have gone with moles for several years together, though they sometimes soon prove mortal; the flooding in this case often happening long before the exclusion of the mole. The danger attending moles increases with their bulk, duration in the womb, and their degree of adhesion thereto; joined with the age, strength, and constitution of the patient. If they are of long continuance, they are apt to degenerate into or cause *scirrhous tumors*, cancers, barrenness and a deal of misery.

Whenever a woman suspects herself to be pregnant with a mole, her best method will be to obtain skilful aid at once. And in the interim to regulate her diet and Regimen accordingly. In general whatever tends to promote the menstrual flux, to forward difficult labours, and to hasten the *lochia*, may be serviceable here. Violent motion seasonably used may conduce to free the patient, but before any thing of this kind is attempted she must be thoroughly convinced of her case, or else consult a Physician.

SECTION 5.

Sterility or Barrenness.

Sterility or Barrenness may be very properly reckoned among the diseases of females, it is such a state of the body, as indisposes it upon the use of the natural means, to conceive or propagate the species, and as few married women who have not children, enjoy a good state of health, it is hence classed among the diseases. Barrenness may proceed from various causes as the want of proper age; a hectic, or feverish sickly habit; an obstruction, tumor, callosity, cicatrix or distortion of the womb, an obstruction or defect of the menses, the *fluor albus* which by continuing long may greatly relax the glands of the uterus; an inability to retain and cherish the *semen virile;* the *omentum* passing upon the orifice of the womb and closing it up, from a straitness or imperviousness of the *vagina* and *uterus*. It may also on the part of the male, proceed from some defect, as a seminal weakness; want of due erection; virulent or ill cured venercal cases, fast living, a worn out constitution; and lastly on the part of both from high living, grief, relaxation, sudden fear, anxiety or any of the passions.—

When barrenness is suspected to proceed from affections of the mind, the patient ought to be kept as easy and cheerful as possible; all disagreeable objects are to be avoided, and every method taken to amuse and entertain the fancy. They should take sufficient exercise in the open air, they should use the cold bath, be electrified frequently, and take Peruvian Bark with other astringents, as alum, dragons-blood, Elixir of Vitriol—and Cordial Tincture of the Bark.

As however, the causes of sterility are so various, and it would be impracticable in this place to enumerate the whole, together with their appropriate remedies, we would recommend such patients to consult some eminent and skilful practitioner, to whom their cases may be submitted with advantage.

CHAPTER V.

Delivery.

SECTION 1.

Natural Labour.

A Natural Birth is that which happens in about forty weeks after conception unattended with any extraordinary or uncommon symptoms: it has been usual to fix the time at nine months, that is, thirty-nine

weeks, or two hundred and seventy three days after conception. It may from some circumstances, not actually known, be considerably shortened, and on the other hand also considerably lengthened. The most probable cause is, that the exact period of impregnation being very difficult to be easily ascertained, women reckon inaccurately.—

The approach of labour is announced by a variety of sensations, which though certainly distressing and disagreeable to the woman, being occasioned by circumstances which are preparatory to an easy delivery, ought to be considered as favourable symptoms. Previous to labour the belly generally becomes much diminished in bulk This originates from the child's sinking to the lower part of the belly. The first signs of labour are pains in the back and loins, which occur at irregular intervals, and which induce the most disagreeable sensations. These are occasioned by the incipient contractions of the womb; they serve the valuable purpose of gradually opening the orifice of that organ which had become closed up a short time after conception. These pains are sometimes accompanied with pains in the belly resembling those of the cholic and are distinguished from them only by their seat, as being in labour generally felt towards the bottom of the belly. These are apt to increase, and returning by intervals seize the region of the loins, upon this the face appears somewhat inflamed; the pulse and respiration are quick and irregular, a draught, and sometimes a hoarseness of the voice attend; as also a vomiting and sometimes universal tremor, but especially in the legs and thighs: And all these symptoms increase gradually as the time of delivery comes on; which is commonly preceded by the discharge of a thickish humour tinged with blood, and is vulgarly called the *Shews*, this is considered to be a certain sign of the sudden breaking of the membranes, and issuing out of the waters, and now upon examination, the orifice of the womb will be found dilated; soon after which the membranes break, the waters come away, and, in case of a natural birth, the woman is immediately delivered, with proper assistance.

There are sometimes *spurious* or false labour pains, which occur most commonly towards the evening, and are most troublesome during the night; they are distinguished from true labour pains, by being more trifling and irregular. In many woman the spurious pains are attended with a discharge which somewhat resembles that produced by true pains; a circumstance which is apt to impose, not only on the patient, but on some practitioners, hence in many cases it requires a degree of judgment to distinguish the true from the spurious.—

Most women are impressed with much apprehension at the beginning of labour, which if indulged, may be productive of bad effects, one or two cheerful friends are important on those occasions; more might be hurtful —As soon as it is ascertained that labour has actually commenced, if it has not been attended to before, it is essential to attend to the following particulars: Avoid Cordial heating drinks—they have a tendency to promote fever; examine when the bowels have been evacuated, if the patient is at all costive, injections or as they are called *clysters* must be administered to empty the intestines, so as to prevent in some measure their pressure on the

womb in particular parts, which may greatly retard the delivery. Also the contents of the bladder, if necessary, must be emptied by a *Catheter*, the manner and use of which, every midwife should make herself intimately acquainted with—The bed on which the women is to be delivered, should be prepared, by being placed in such a position, that the room may be ventilated without the patient being exposed to a current of air—A hair matrass should be placed over the feather bed, and on the mattrass one or more dressed sheep skins or a pair of oil cloths ought to be spread, and the dress of the patient ought to be as light and simple as possible that it may not overheat them or embarrass the practitioner.—

SECTION 2.

Delivery how performed in the natural way.

In natural labour the head of the child comes down foremost, and is wonderfully accommodated to the passage through which it proceeds—If the child presents itself any other way at the birth it is then termed unnatural

The woman being commodiously placed, with her head and breasts raised high, with the other preparations mentioned in the foregoing section. The midwife by introducing her finger from time to time into the womb, and comparing the several symptoms together, and especially when the *shews* appear, learns that her assistance is necessary, she then anoints her fingers, and introduces first one and then another into the womb, till at length the whole hand gains entrance; wherewith the membranes being now broken, she takes hold of the child's head, which in a natural posture lies downwards with the face towards the mother's back; the arms also being stretched out and lying parallel to the sides, &c. And now she is to endeavour by gentle means to extract it in the posture she finds it, the mother in the mean time regulating her *throes* and managing her breath so as to assist in the operation, which is commonly easy and expeditious, unless the parts prove strait.—When once the child is advanced so far as the ears, the midwife takes hold of both sides of the head, with both her hands, and gradually pulls it forwards up to the shoulders, which often prove a considerable obstacle, and if the child remain long in this state, it is in danger of suffocation. When once the shoulders have made their way, the other parts usually follow without much difficulty, except the hips. When the child is quite extracted, the next thing to be brought away is the *placenta* or after birth; in order to which the *umbilical-cord* or navel-string must be gently drawn forwards; and upon this the *secundines*, or burthen will follow. Great care must here be taken, that no violence is offered in drawing the *cord* too strongly, for fear the *placenta* should adhere to the womb, in that case it ought to be separated in a very gentle manner, but so that no part of it be left behind; which might prove the cause of convulsions, violent

flooding, and death itself. After the entire extraction of the child, it is finally separated from the mother, by immediately cutting the *umbilical-cord;* care being taken of the child whilst the *placenta* is extracting, which in natural births, is generally brought away entire and with considerable ease.—*See also Chap. 6, Sect. I. Twins.*

The *umbilical-cord* is cut in the following manner, when the length of about nine inches of the navel-string is extracted with the child, upon drawing away the after birth, a waxed thread is passed several times round it, at the length of two or three inches from the childs navel; and again at about the distance of two inches from the first ligature, towards the mother; when the cord is thus tied in two places between the mother and the child, to prevent loss of blood on either part, the cord is immediately cut asunder with a sharp pair of Scissors between the two ligatures, and that part thereof which belongs to the mother is carefully put up into the womb, to come away with the after-birth, and what belongs to the child is carefully placed between two bolsters of fine linen and turned up towards the pit of the stomach. Some wrap the cord in a fine rag and afterwards secure it with the belly-band. In tying the ligature, great care should be taken that the thread be drawn neither too tight, nor too slack, for if it be tied too tight there is danger of cutting the cord asunder in that part, and a mortal hœmorrage might ensue, and if too loose the like bad consequences may also happen, such hœmorrage has happened several days after the birth of the child; that part of the umbilical-cord which was left with it usually withers away, and spontaneously falls off in nine or ten days time. After the withered cord is thus fallen off, the navel frequently remains tender and raw for some time, if this be troublesome, tis proper to sprinkle on it a little finely levigated calamine stone two or three times a day; if the parts appear inflamed, a soft compress dipt in milk about blood warm; and if discoloured, a little brandy may be added to the milk and applied In case of a suppuration, it were best to consult a Physician or experienced midwife.—

The after birth.—After the delivery of the child, the mother again feel pains, which are occasioned by the womb renewing its contractions. They are termed grinding, from their being much less violent than those by which the expulsion of the child was accomplished. When these contractions have continued for a certain time, the *after-birth &c.* is separated, and then thrown off, and the sides of the womb become every where in close contact, by which means the orifices of the large blood-vessels which are ruptured by the separation of the after-birth are stopped up, and consequently the discharge of blood, which might otherwise prove the source of the greatest danger, is prevented, the appendages of the child are generally expelled within four or ten minutes to an hour after delivery —

Before the *after-birth* is excluded it is an important object to discover if there be any other child in the womb; and therefore that must be ascertained immediately after one child is born. The marks by which the presence of twins, triplets, &c. may be distinguished, will be hereafter described. In assisting the delivery of the *after-birth*, the practitioner must wait for the contraction of the

womb; for if that be not attended to the most dangerous consequences may follow. It is of great importance that this circumstance should be properly understood; for the patient's life after an easy labour, may be destroyed by the rashness of an ignorant assistant. By explaining however the cause of danger, those who are prevented from being under the care of persons of skill, may be enabled to counteract the effects of ignorance, and thereby escape those hazards, to which they would otherwise be exposed.—

The greatest portion of the womb at the full period of pregnancy, as observed chap. 2. Sect. i. is quite unconnected with any of the neighbouring parts and is therefore unsupported. It has been also observed that the after birth is most generally attached to its bottom. If therefore the extraction of the appendages of the child, be attempted before the womb contracts, the inside of that organ will be turned out, the womb being thus inverted. if the rash practitioner continues to pull down, the inverted womb will be drawn out of the woman's body, and death will soon follow. The manner of treating these kind of accidents will be hereafter mentioned.— When the grinding pains are felt, by which the contraction of the womb, is distinguished, the practitioner should then assist the expulsion of the after-birth, by pulling gently by the navel string during a pain, and by endeavoring to bring it down through the basin in such a manner, that its progress may not be interrupted by any of the neighboring parts

While the assistance thus described is given by the practitioner, the patient should bear down moderately; all violent exertions should be avoided for by coughing, sneezing or the like; dangerous symptoms might be induced.—When the contractions of the womb are slow, they may be assisted by gently rubbing the belly of the women, with the hands of the assistant.—

In case of faintness during the delivery the patient may have volatile Salts or spirits applied to the nose, these by their stimulating properties may assist in procuring the *throes* and exclusion of the child, at the same time that they prove otherwise serviceable When the whole affair is over, the woman, if she were delivered up, is speedily to be put into a warm bed, some eminent Midwives recommend previously thereto, the giving of a tumbler of *cold water* to the Patient which they observe enables them to take cold water at any time after without danger of taking cold — The assistant then doubles a large linnen cloth previously warmed, which she applies in the form of a bandage or swathe, to the abdomen of the woman, which is occasionally straitened, as the abdomen relaxes.—For the first two or three days after delivery the woman should be somewhat sparing in her diet, which ought to be chiefly liquid, and consist of panada, gruel, chicken broth or jellies— after this. if there be no fever, a little boiled chicken or veal may be allowed, and if the appetite will serve or the constitution requires it even Lamb or Mutton, until a common of method life be again introduced by degrees.—

Rest and sleep should be indulged for a considerable time after delivery, but if through pain, fatigue or other violent symptoms it cannot be naturally obtained, we must endeavour to procure rest by giving a gentle anodyne composed of from twenty to twenty-five

drops of Laudanum with a like quantity of Salvolatile, which may be repeated if necessary. If the woman be costive, clysters of milk and sugar with a little Fennel water, may be occasionally administered, afterwards Lenitives, such as stewed Prunes, Manna, pulp of Cassia or the like may be given. The passions of the mind are to be cautiously regulated during a complete month after delivery. And too much care cannot be taken during the first eight or ten days to prevent taking cold, either from damp linnen, or cold air admitted under the clothes, or to the abdomen of the patient.—

After pains.—Sometime after the birth is brought away, the woman feels great pains in her loins, groins, &c which are seldom dangerous, unless heightened by a detention of the *Lochia* which in this case ought to be promoted, a strengthening plaister may be applied to the small of the back, the abdomen kept moderately warm, and the pains eased by suitable doses of Laudanum. These pains generally cease on the free discharge of the *Lochia*.

Lochia or the discharges from the womb after delivery usually continue to flow for the space of thirty days, during which time 'tis customary, indeed decent for the woman to keep within doors; but some particular robust constitutions can easily dispense with the rigor of this custom, and venture abroad in seven or eight days after delivery, when the *Lochia* must be fresh upon them, and which exposes them to very great danger. The regular flux of the *Lochia* should through the whole month be promoted by a suitable posture of the body, as lying with the head and abdomen raised, &c. She must avoid cold air especially for the first week or two, as exposure to the open air, damp clothes, &c. may cause a sudden stoppage of this discharge and thereby throw the patient into imminent danger of her life.—If no particular symptoms indicate the contrary, the woman may rise in about a week after her delivery and sit up for an hour or two at a time, if her strength will allow it.—If however a suppression of the *Lochia* takes place, the woman must encourage their return by drinking freely of pennyroyal tea, unless she is feverish, and dry fictions upon the legs may be used to advantage, if the case proves obstinate, and if attended with a *plethora*, bleeding is advisable, as also are the following powders. take of Myrrh and Borax each half a drachm, Spermaceti one scruple, volatile salt of Amber ten grains, reduce them to a fine powder, and divide them into ten doses, one of which may be taken every hour or two in a small cup of Pennyroyal tea blood warm, and generally this case is to be treated in the same manner as an inflammation of the womb.—On the other hand if the discharge of the *Lochia* be profuse or immoderate, small doses of the Elixir of Vitriol, in simple Cinnamon water, which may be sweetened with Syrup of Poppies. Should be taken every two hours or oftener if necessary. The patient should lay on her back, with her head low, and body raised—and cloths dipped in vinegar in which a lump of crude Sal Ammoniac has been dissolved, should be applied cold to the lower belly and loins, injections of a strong decoction of Red-Oak Bark, in which Salt Petre, Alum, and White Vitriol have been dissolved, may be frequently thrown into the womb, in cases of the most dangerous kinds—and the treat-

ment here may be much the same as in an immoderate flow of the menses, Chap. 3. Sec. iii.—

SECTION 3.

Treatment of the Infant.

We come next to consider in what manner the child is to be treated, after it is separated from the mother. And first a proper linnen cloth and warm flannel being provided for its reception, it must be laid thereon, and kept warm whilst the midwife performs the remaining part of her office to the mother. But if the *placenta* be long in bringing away, it will be proper in the mean time gently to wash the infant with a soft linnen rag dipt in warm water, or a little weak butter-toddy made warm in order to take off the scurf, if the child appear weak a little weak *brandy-grog* is an excellent thing wherewith to wash it outwardly, but be careful that none of it slip down its throat, since internally it is pernicious. It is of importance to prohibit the internal use of spirits of all kinds, either alone or mixed with its food unless in cases of extreme debility. After the child is dressed it is usual to give it a little fresh butter and sugar which commonly proving Emetic, brings up a quantity of phlegm, that was lodged about the stomach, *larynx*, &c. and afterwards turning down, purges off the *Meconium* or black fecal matter from the intestines. Castor Oil and Molasses, or a tea-spoonful of the sweet oil of almonds, given two or three times a-day, will bring away the residue—some also give the Syrup of Peach flowers, or of Roses for the same purpose.—If the child be subject or inclinable to fits or convulsions, tis usual to give it now and then a little levigated Coral in any convenient Syrup, and to bathe it in blood-warm water, if these means do not avail, it must be treated as directed in Chap. lvii.* under the article Convulsions The infant should lye with its head considerably raised that the phlegm wherewith children abound, may the readier be discharged and suffocation be prevented, the sudden deaths of young children are, tis very probable, often owing to a neglect of this caution.—In general where the mother is healthy, the child should be put to the breast as early as possible, even on the first day. It prevents the milk fever in a great measure, and has been found the best Medicine for discharging the *Meconium*. The child should also, except in very cold weather, be bathed daily in cold water, or at most tepid water, and be kept clean, in every other respect, this tends to brace the system and invigorate the habit.

* Domestic Medicine Page 388.

SECTION 4.

Of Diseases incident to Child bed Women.

Besides the diseases incident to women at delivery already mentioned there are others to which they are liable within the month, these are —

Milk Fever.—About the third day after delivery, the breasts become turgid from the milk secreted in them, and at the same time the uterine discharges begin to diminish; this period is generally attended with some heat, thirst, head-ach and fever, all which however may be prevented, or at least very much diminished by putting the child, as early as possible to the breast, the bowels should be emptied by injections of mutton-broth with the addition of a little molasses. The patient should diet low, and keep a gentle moisture on the skin, for which purpose nothing is better adapted than *Minderics' spirit*, this is made readily by taking a small lump of the volatile salt of Hartshorn, and pouring on it good vinegar, a little at a time, agitating the mixture frequently, till it ceases to *effeverse* or bubble and becomes perfectly neutralised, tasting neither of the salt, nor of the vinegar. When this point is obtained, a table spoonful may be given every hour in any warm drink until the patient begins to enjoy a free perspiration and then is to be repeated at intervals only of three hours. This mode commonly removes the fever in the first twenty-four hours.—

Inflammation, &c. of the Breasts.—The breasts of women after deliver, are apt to be variously affected, and are attended with pain, tension, heat, redness of the part, a fever and other symptoms of inflammation. To obviate which, a slender regimen must be observed, the bowels kept open, and the breasts emptied repeatedly either by the infant or by artificial means.—If a lump forms in the breast it must be frequently bathed with a mixture of one part vinegar and three parts water applied milk-warm, and the breast must be kept constantly covered with a bit of flannel wet with Opodeldoc. When, notwithstanding this treatment, the inflammation and tumefaction increase, an ointment composed of two ounces of the ointment of Jamestown or stinking weed, with a drachm of powdered Camphor, and two drachms of Laudanum, properly incorporated, may be applied to the breast and renewed repeatedly. If these fail, and the breast be likely to suppurate, a poultice of bread and milk, softened with a little warm olive-oil or fresh butter applied three or four times a day will be found a proper application for hastening the suppuration. When the imposthumation breaks, the discharge of matter is to be encouraged, and if any hardness remain, the same may be rubbed with camphorated oil, or a plaister of common diachylon, or of the mercurial plaister be laid on and the parts kept covered with flannel. —

Sore Nipples, &c.— These are a very painful and troublesome disease; a little cerate of wax and oil is a good application, and a ring

of wax just sufficient to let the nipple through, yet so as to defend it from the friction of the clothes, contributes to their healing. When they become ulcerated, washing at first with a solution of fifteen or twenty grains of sugar of lead in half a pint of rain-water for a few days, (but washing the nipple each time before the child sucks,)--after which weak Solutions of Borax, White Vitriol, or alum in brandy seldom fail to cure. One of the simplest and perhaps most efficacious applications is keeping a fine linen cloth constantly wet with good old Jamaica Rum to the parts. Or to use constantly a lead-nipple shell, which is to be cleansed two, three or four times a day.

Puerperal or Child-Bed Fever.—The most fatal disorder consequent upon delivery is the puerperal or child bed fever.—It generally makes its attack upon the second or third day after delivery. Sometimes indeed it comes on sooner, and at other times though rarely it does not appear before the fifth or sixth day. It begins like most other fevers, with a cold or shivering fit, which is succeeded by restlessness, pain of the head, great sickness at the stomach, and bilious vomiting, the pulse is generally quick the tongue dry, and there is a remarkable depression of spirits, and prostration of strength. A great pain is usually felt in the back, hips and region of the womb; a sudden change in the quantity or quality of the *Lochia* takes place, and the patient is frequently troubled with a *tenesmus* or constant inclination to go to stool. The urine which is very high coloured is discharged in small quantity and generally with pain. The belly sometimes swells to a considerable bulk and becomes susceptible of pain from the slightest touch.

When the fever has continued for a few days the symptoms of inflammation usually subside, and the disease acquires a more putrid form: at this period if not sooner, a bilious or putrid looseness, of an obstinate and dangerous nature, comes on, and accompanies the disease through all its future progress. As there is no disease to which women in child-bed are liable, that requires to be treated with more skill and attention than this, the best assistance ought always to be obtained as soon as possible. In women of plethoric habits, bleeding will generally be proper at the beginning; it ought however to be used with caution, and not to be repeated, unless the signs of inflammation rise high; in which case it will also be necessary to apply a blistering plaister to the region of the womb.

During the cold fit proper means should be used to abate its violence and shorten its duration, for this purpose the patient may drink freely of warm diluting liquors, and if low, may take now and then a cup of wine whey; warm applications to the extremities, as heated bricks, bottles or bladders filled with warm water, may be used with great advantage. Emollient clysters of milk and water, or of chicken broth may be frequently administered through the course of the disease. To evacuate the offending bile from the stomach, some have ventured on emetics, these being apt to increase the irritability of the stomach already too great it will be safer to omit it, and give in its stead a gentle laxative, which will both tend to cool the body, and to procure a free discharge of bile —One of the most useful preparations in this fever is the *Saline draught*, or as some term it the *neutral mixture* or Saline Julep: the mode of preparing

which is to be seen in the Appendix. One or two table spoonsful of which taken every hour or two, often puts a stop to the vomiting, and at the same time lessens the violence of the fever. If it runs off by stool, or if the patient be restless a few drops of Laudanum may be occasionally added. If the stools prove too frequent, and thereby weaken and exhaust the patient, a starch clyster with thirty or forty drops of Laudanum may be administered as occasion shall require, and the patient may drink freely of rice-water in which, to every pint, half an ounce of gum arabic may be dissolved. If these fail recourse must be had to the powder of Colombo-root, and other astringent medicines.—When the fever degenerates, or acquires a putrid form, the Peruvian Bark must be given either by itself, or joined with cordials as circumstances may require. As the bark in substance will be apt to purge, it may be given in decoction, or infusion mixed with the Tincture of Roses or other gentle astringents.—If the stomach will bear no kind of nourishment, the patient may be supported for some time by clysters of beef tea, or chicken water.

For the other diseases we refer the reader to those diseases respectively as they are inserted in the body of the work under appropriate heads.

CHAPTER VI.

Difficult and Unnatural Births.

Difficult Births are those wherein the woman continues in the pains of labour for more than twenty four or thirty hours after the womb has begun to contract, without being delivered.—*Unnatural Births* are those wherein the child presents itself in any other way than with its head foremost, or downwards, and its face turned towards the mother's back.—

SECTION 1.

Difficult Births.

Difficult births or lingering labours may proceed from an uncommon straitness of the passages; particularly in very young, or elderly women who have never been delivered before, as also in such as are of a dry hectic constitution. Sometimes also the membranes breaking long before the time of delivery the waters are wanting, which should lubricate and relax the parts in order to procure an easy expulsion of the child, and sometimes again, these membranes being too thick or strong, will not break in season; or when the time of delivery is at hand. There may also be a great weakness on the side of the mother, which disables her throes; and a like weakness

on the part of the child, which lessens the effect of its strugglings. To these causes may be added the piles, convulsions, a large accumulation of the *fæces* in the intestines, which press against the neck of the womb, the fulness of the bladder producing the same effect, a dropsy of the womb, tumors, ulcers, &c. in the womb and parts adjacent, a relaxation of the womb, the large bulk of the child, Twins, unseasonable flooding, a distortion of the passage, a dead child, &c. &c.

When the birth is retarded by any particular, or general straitness of the passage, a lubricating diet consisting of gellies, broths, &c. with unctuous ingredients should be used, the bladder and intestines must be directly emptied by the Catheter and emollient clysters occasionally repeated, and a little before the expected time, the parts must be anointed with a little fresh hog's lard, or the ointment of elder or of marsh-mallows, and internally a drachm of Spermaceti three, four or five times a day along with the broths or other liquids. The Medicines used before the breaking away of the waters, ought not to be of too forcing a nature; lest by causing an immature evacuation thereof the delivery should be retarded. When the passage, notwithstanding the use of these means, remains still too close, recourse may be had to a proper instrument made on purpose to *dilate* and widen the orifice of the womb by gentle degrees: but this should be done in the most careful manner and by a skilful practitioner.—

When the waters come away unseasonably, or long before the time of delivery approaches, it will be proper to lubricate and relax the parts by the external use of emollient oils, ointments, lard or fresh butter, and to inject into the womb a proper quantity of the oil of sweet almonds, or of olive oil, the throes in the mean time being encouraged by all the artificial assistance the mother can afford, as by regulating the breath in inspiration, sneezing, &c.—

If the labour is known to be retarded by a thickness of the membranes including the child, so that they do not break in due time, which may be learnt by the collection, and long continued bulging out of the waters, and the common means such as walking, fail to effect a separation, and the case appears desperate, they may be cautiously cut, or torn asunder in order to obtain a free passage for the child.

When the child is large, or dropsical in a particular part, or when the woman labours under a great weakness, or wants sufficient strength to raise or support her throes. She ought now and then to take a glass of cordial water, or aromatic wine, and have her strength supported by such diet as affords the greatest nutriment, and if nothing forbid it, proper *sternutatories*, or snuff to provoke sneezing, may be given occasionally, or even an emetic of hippo.—

If costiveness or suppression of urine retard the delivery, the women is to be treated in the manner above recommended, as in straitness of the passage, &c.—

If convulsions retard the delivery the case is extremely dangerous, proper internals or cordial medicines should be freely given to put off or defer the fits. These consist of the tinctures of valeian, of saffron, of castor, and of camphor, as also spirits of sal volatile,

and red lavender—in the mean time regard is to be had to the particular state of the patient, and the stage of the labour and the delivery to be expedited the best possible way—but if it cannot be effected recourse must be had to the most experienced Practitioner.—

Dead Child.—It was formerly the opinion that the child being dead, occasioned the labour to be more tedious and difficult The child being absolutely passive as to its birth tends to do away this belief, since dead children are delivered after a labour, as perfectly natural and easy in every stage, as those that are alive and healthy. If however the child be actually dead, and the woman's pains decrease or go off and the throes return no more, such medicine as are prescribed in case of weakness on the side of the mother may be given If these have no effect, and the waters are already broke away, whilst the patient remains of sufficient strength a dose of hippo may be given to advantage. But if strength is wanted, and much time has been spent in vain, the extraction of the child is to be immediately attempted, either by the manual or instrumental method, especially if there be considerable flooding, convulsions or other dangerous symptoms.—

Twins, in cases of plurality of children, it is necessary to bear in mind, that each child is included in its own proper membrane, and is attached to the mother by a cake peculiar to itself, that in many cases however, the cakes are contiguous to, or entirely blended with each other; but the navel string which belongs to each child points out the distinction between them and proves that a single cake cannot serve two or more children. In some rare cases the blood-vessels belonging to the child of each cake communicates with each other. hence a particular precaution in the management of the delivery of twins becomes necessary.—There are no sure indications by which the existence of a plurality of children can be discovered, till after the birth of one child—for when only one child was contained in the womb originally, that organ soon after delivery diminishes very much in size, while the bowels which were kept out of their natural situation in the latter months of pregnancy, immediately get forward to the fore part of the belly, and hence that part feels soft and yielding. But when a second child remains, the womb does not apparently diminish in size, the intestines therefore remain behind and at the sides, and the forepart of the belly has the same hardness as before the delivery of the first child.

Some circumstance may from time to time occur, which will prevent the practitioner from ascertaining by this simple method, the existence of a plurality of children, in which case he will have to resort to the examination with the hand.—It also sometimes happens that the woman goes with three, four, and sometimes though very rare with five. Yet such is the good providence of God, it seldom happens that the delivery of one child is retarded or prevented by the interference of another. Such cases have however occured and have been attended with considerable difficulty, as in these cases the breech of one child is usually opposed to the head of another: hence the labour must be preternatural and consequently in some degree hazardous.—In every case of twins therefore for the foregoing reasons the second child should be delivered by *turning*, as soon after

the patient's strength is restored as possible; provided neither the head, breech nor feet are next the passage; while the patient has violent forcing pains, in which cases the delivery may be conducted on general principles—In all these cases it is the indispensible duty of the practitioner to stay constantly by the patient till she is delivered: for dangerous symptoms may occur, which might be remedied by timely assistance and which would always perhaps prove suddenly fatal.—Where there are more than two children, the management is not attended with more difficuly than that of twins, the great care of the midwife being directed to prevent their crossing or entangling with one another in delivery, whereby the extremeties of that which is designed to be brought away last, might be easily mistaken for those of the other, such a mistake might prove of fatal consequence both to the children and mother. In order to avoid it, the midwife having first extracted the head and shoulders of one, should gently slip her hands under its arm pits and directly, though gently bring it away. It frequently happens that after one is delivered naturally, the other offers feet foremost or footling as it is called, in which posture it is then to be extracted with the usual care. (see *unnatural births*, feet presentation.) Sometimes after one child is delivered, the other will remain in the womb for some days, which is a dangerous case, and requires the membranes, if not already broke to be carefully cut and the child extracted.

If one of them happens to be dead and the other alive great caution and expedition should be used in the delivery: but sometimes weakness, faintness, convulsions or other bad symptoms may require the operation to be deferred till the patient can in some measure assist herself. This rule ought constantly to be observed that the child which lies lowest in the passage ought first to be extracted.—

If a suppression of urine retard the delivery, and it proceeds from a stone in the bladder pressing upon the neck thereof, it ought immediately to be repelled by the introduction of a catheter: But if the child by bearing hard against the bladder, be the cause of this suppression, the abdomen is now and then to be raised and compressed by a proper swathe or fillet, if this does not produce the desired effect, the water must be drawn off by the catheter.

If a violent flooding precede the delivery, and the patient be plethoric, it may be proper to bleed by way of revulsion, and proceed as in an immoderate flux of the menses chap. 3. Sect. iii.

If the birth should be protracted on account of any imposthumation or ulceration in the womb, and nothing contra indicate, lenient clysters and emollient fomentations must be had recourse to, in order if possible to resolve them; and for the ulcers, pledgits of soft linen dipt in warm red wine is all that can well be done till after the delivery, and then the case may be treated in the ordinary way.

If any old callosity or cicatrix in the *vagina* or womb create a difficulty, in the delivery, the parts must be fomented with warm milk or oil of almonds, or a piece of prepared sponge may be put up in the form of a pressary in order to dilate the parts, and in failure hereof, an instrument must be used for that purpose: In desperate cases the callosity or cicatrix may be pared away, like a wart or corn, and taken down by incision, so as to widen the passage for the child.—

If the womb or its ligaments are relaxed so as to retard the birth, cloths dipt in warm red wine may be frequently applied to the parts, and the posture of the woman must be such as may best favour the delivery; in other respects this case may be treated as the common bearing down, relaxation or *procidentia uteri.*

Sometimes upon the relaxation of the ligaments of the womb, there ensue or are supposed to ensue three different disorders of the part, a *bearing down;* a *prolapsus* or *procidentia*, and a *perversio uteri*— a bearing down of the womb, is its falling into the *vagina;* so that its orifice may either be readily perceived with the finger within, or by the eye without the *labia vulvæ* A *prolapsus uteri*, is when the womb falls quite down and hangs pendulous without the *labia vulvæ;* but in such a manner, that no more of the inside, than the orifice is visible to the eye. But when the womb falls down thus low, and is at the same time turned inside outwards, and hangs downwards like a fleshy bag; with a rugged unequal surface, the case is then called a *perversio uteri;* this latter cannot happen during pregnancy unless in cases of premature delivery, &c. If there be a real *prolapsus* of the womb, the part should be immediately replaced, and a gentle clyster administered, if the womb be swelled or inflamed, a *fotus* of warm red wine may be first used; and then with a soft fine linen rag it is gently by degrees to be replaced, the patient all the while lying supine, with her hips somewhat raised, and after the delivery she should keep her bed five or six weeks, her hips being constantly elevated and her legs somewhat across or joined together, and she may also wear a pessary of cork or sponge with a hole in the middle to allow the free passage of the lochia.—And her diet and medicine should be of the restringent kind.

A real *perversio uteri* is a very rare case unless as above-mentioned. When however such a case does happen, it ought to be replaced immediately, or as soon as possible in its natural state, and with the cautions above-mentioned: and to observe the same regimen, diet and medicine, which should all be somewhat astringent: but if this method prove unsuccessful, a proper swathe or bandage for the whole abdomen must be worn, or a *truss* so formed as to keep the part in its proper situation, the patient in the mean time avoiding every action which might tend to bring it down again, such as straining, sneezing, &c. &c.

When a distortion of the *vagina* hinders the exclusion of the *fœtus*, the woman must be placed in a suitable posture to answer it, so as most to favour the delivery, that of standing is generally preferred there are however some cases of distortion which require the woman, to kneel, to lean on one side or to be reclining, these postures are best concerted by the patient and midwife.—

Sometimes the delivery will be retarded by the *stickage* of the child in the orifice of the womb, between its neck and shoulders, this case requires great care and expedition as well as ingenuity on the part of the midwife, to prevent the suffocation of the infant, and also to avoid pulling away the head quite from the shoulders, which make the resistance. This stickage is gently to be eased by introducing the fingers or hand between the neck of the womb and that of the child, and thus relieve the patient.—

The *umbilical cord* or navel string is sometimes wound about the neck of the child, which requires to be disentangled in order to the preservation both of the mother and infant, before the time of delivery. To prevent any fatal accident from this cause, the midwife ought to satisfy herself by examination, before she enters upon her office; and if she finds the cord thus entangled, by all means to endeavour to clear and reduce it to its natural situation, if it appears however impracticable to pass the string over the head with safety, which should always be first attempted with moderate exertions, a ligature may be applied, in an eyed probe or bodkin upon that portion of the string round the childs neck, by passing it underneath between it and the skin: it should then be securely tied and carefully separated, or cut through on the maternal or mother's side, and the child then given into the hands of the nurse, while the completion of the labour proceeds as in common cases.—It would be best however if ligatures could be made in two places as in the common way, it might prevent a troublesome hæmorrhage.

SECTION 2.

Preternatural or Unnatural Births.

All unnatural births ought as much as possible to be reduced to the natural kind: thus when the head presents itself sideways, the child, if it be practicable, should be gently put back and turned to the natural situation before it is extracted, but if it is already advanced too far for this, for instance to the neck, it may then by turning be reduced to the proper posture, and then extracted as in natural labours.

Feet presentation.—If after the waters are broke away, the feet present themselves the first, some danger may attend any attempt to turn the child, tis therefore more advisable to endeavour to extract it in the manner that it offers; when it is advanced as far as the hips, it may, with less hazard of its slipping, be gently drawn by wrapping a fine single napkin around it, but if the face now happens to be upwards, it ought to be turned downwards to prevent the hazard of suffocation, violent contusion of the face; catching of the chin or pressure of the nose against the *ossa innominata* or *pubis*. If only one foot appears, let it be ascertained whether it be the left or the right, which will direct the search for the other, and when by this means they are both found and placed together the operation may be performed as above-mentioned.—

Hands and Feet.—When both the hands and feet present themselves at once tis impossible to proceed whilst the child remains in this posture, the hands are therefore to be turned back or replaced, the feet remaining as before, and then the extraction may be performed as above.—

One hand or both.—If one hand and arm or both come forwards, they must be put back and replaced if possible, but when they are far advanced the case is attended with danger and the operation with

difficulty. Here it requires great skill on the part of the midwife, who must if possible search for the feet and turn the child, but before this is attempted the parts of the mother must be well prepared, and especially if the waters have been sometime evacuated. If the child be dead recourse must be had to the operation.—

The Knees.—When the knees present themselves, whilst the hams are turned backwards towards the *breech*, great care must be taken not to mistake them for the head; to which purpose the part should be traced up to the ham, and the woman being laid in a convenient posture for delivery, search must be made for the feet; observing that the childs face be kept towards the mothers back, and thus it may be extracted.

Shoulder.—When a shoulder presents itself first, the case is difficult upon account of the great distance of this part from the face, to reduce the case the child must be replaced, and then as well as possible, the hand being introduced, search must be made for the feet, which being brought out first the *fœtus* may be extracted.—

Back.—When the back comes foremost, the child runs the risk of being suffocated unless the posture be presently altered, nor will it be possible to procure delivery, without finding the feet and bringing them out first.—

The Breech.—When the breech comes first the posture must be reduced and search made for the feet, as in other unnatural cases, when this is impracticable, and it occupies the bottom of the cavity of the womb, or is strongly wedged in it, and especially when it has cleared the orifice of the womb, we ought not to think of bringing down the feet, because it would expose both the mother and child to additional danger: But we must endeavour to bring along the breech with the forefinger of each hand, curved like a hook in the bend of the groins* and where the child is small and the pelvis of the large kind, delivery may be attempted in the manner wherein the child is presented:† for there are instances of successful delivery in that double posture —

The Breast or Belly.—When the breast or belly, presents first, the case is often dangerous, because it is impossible to extract the *fœtus* as it lies in that posture; and the spinal bone can never be bent backward with safety. When the belly presents itself the the umbilical cord generally appears first. In these cases the midwife is diligently to replace the parts, and find out the feet, remembering always to turn the face of the child to the back of the mother, and so to deliver it.—

The sides or lateral presentation: When either of the sides come first the case is less dangerous, and the method of extraction much the same as the foregoing.

The loins.—When the loins present, the midwife must proceed in the manner recommended in the presentation of the back.—

Nape of the neck.—When the back of the neck presents, a delivery cannot take place without restoring the head to its natural situation,

* Baudeloque on Preternatural Labours, page 324.
† Shaws Practice, part 2. page 511.

or else to search for the feet, and if accidents complicate the labour, the child must be turned, without attempting other methods.

The throat.—When the front of the neck or throat presents, the proceeding is to be the same as the foregoing.—

Umbilical Cord.—When the navel string comes first, whether the child be in a natural or unnatural posture, the case will be attended with danger unless the delivery be suddenly performed, because from a contusion of the part or coagulation of the blood in the umbilical vessel, the circulation is apt to be stopped which is frequently the death of the child, and causes violent symptoms in the mother. In this case the midwife must attempt to replace the cord, and afterwards extract the *fœtus* either by the head or feet: the operation being expeditiously performed, for fear of a prolapsion of the cord, and the death of the child, who is commonly a great sufferer by this symptom if not suddenly removed.—When the umbilical cord is broke, the danger is greater on the side of the mother than of the child, because of the difficulty there will now be to extract the *placenta* or after birth, which remaining long behind, either in whole or in part, causes violent flooding, convulsions, and sudden death, whereas on the part of the child, if once naturally delivered this inconvenience is soon remedied by a ligature. If any part of the umbilical cord remains fixt to the *placenta* it may serve to conduct the midwife thereto, and then may be separated in the manner described in natural births. But if it breaks close to the *placenta*, the hand must be introduced and the cake being distinguished from the bottom of the womb by the number of its little inequalities on the side where the *umbilical* vessels terminate: it may, if it be loose, or adhere not too strongly to the womb be readily brought away: but if any part of it be fixed thereto, that part must be first loosed and set free by the fingers. And if by this means it cannot all be brought away, tis safer to leave some part behind than by a rude treatment to offer violence to the womb itself, after which it may be proper to give some such medicine as the following to forward the expulsion of the remaining part of the *placenta*, viz. Take of the tinctures of myrrh and castor half an ounce of each; tincture of saffron two drachms, pennyroyal water six ounces, mix for a julep, of which three or four table-spoonsful may be taken frequently through the day; emollient clysters and injections have also their use in this case.

The placenta.—When the secundines or after-birth presents itself or comes away before the child, the danger is very great the child in this case being often suffocated, and the mother usually flooding violently whilst the child remains separated in the womb, and cannot readily be excluded. The delivery is here immediately to be attempted, the child is to be laid hold of and instantly brought away, without spending time to reduce it to the most desirable posture, if that cannot be readily obtained, for fear of endangering the life both of the mother and child. Upon a complete delivery the flooding generally abates or ceases: but if it should not it must be treated with proper astringents as directed for the immoderate flow of the menses, &c.

SECTION 3.

General Concluding Remarks.

In all preternatural labours, when the child lies in such a situation that any part except the head, or lower parts is placed next the passage, nature cannot accomplish the delivery; and therefore unless the position of the child be altered, the life of the woman must be generally lost. The operation by which this is performed is by midwives called *turning*, and consists in bringing the feet into the passage. When the bad disposition of the child is discovered before the waters are drained off, this operation may be had recourse to with perfect safety (provided the woman be in good health) and without much pain to the patient or trouble to the midwife. But when, either from the restlessness of the patient, or from the improper interference of the practitioner the waters have been prematurely evacuated, the life of the child must be generally in danger, and the woman also will be exposed to some hazard.

The dangers which in such cases threaten the woman and child, proceed from the womb being closely contracted round the body of the infant soon after the waters are off, and from the spongy state of the womb in the latter months of pregnancy, which renders it easily torn if much force is employed—from this circumstance the child has been often pushed through the substance of the womb into the cavity of the belly, and in by far the greatest number of these cases the woman generally dies.—

The operation of turning therefore should never be attempted by those who do not possess a perfect knowledge of the principles necessary to accomplish it, as it is said by an eminent practitioner *Hamilton* to be the most difficult operation which can be performed on the human body, and as such requires the greatest exertion of skill. Many women by their improper behaviour add much to the natural danger attending *turning:* for the temporary pains which they must necessarily feel instead of being borne with patience, often makes them unmanageably restless, on such occasions any injury which may be done in consequence thereof ought to be attributed to themselves and not to any error of the midwife.—In every case of preternatural labour it is of great importance that the passages should be sufficiently prepared for the delivery of the child, before any part of it be brought down into them, and the utmost care should be taken that the woman may not by restlessness, or the midwife by officiousness, occasion the waters to be discharged at an early period of the labour.—

In most cases of preternatural labour, if the woman be healthy the delivery may be accomplished, without any extraordinary assistance, with perfect safety to the mother, but the life of the child is often very much endangered. This circumstance originates from the child being exposed to the compression of the womb, a longer time than in cases where the head is first in the passage, which is occasioned by the increased space which it then occupies. This will be easily understood from the manner in which the child is expelled

when any of its lower parts come down first; for in proportion as the body advances, the arms are pushed up towards the head, till at last they are placed along each side of it, consequently they increase its size. Another cause which certainly contributes to render the delivery less expeditious in these cases is, that the lower parts of the child are seldom forced into the passage in that direction in which they take up the least possible room. Hence it requires a long time before the contractions of the womb can have the effect of adapting them to that situation, unless therefore assistance be given in all those cases, there is always a risk of the child's life, or at least some of its parts are exposed to great injury.—

From those considerations preternatural labours contradict in the most evident manner, the opinions of those who pretend that nature alone may be trusted in the delivery of women; for in such cases death would most generally ensue if proper assistance were not afforded.—And here it may be necessary to remark as a guide to assistants, that while too much eagerness or rashness cannot be reprobated in sufficiently strong terms, so excessive timidity, as it may be as fatal to the parties, should be as carefully avoided. A proper degree of steady resolution, equally distant from rashness as timidity, while it enables a practitioner to operate in these cases with success, can only be the result of dexterity, and a perfect acquaintance with this branch of Medical Science.—

MEDICAL ELECTRICITY.

The application of this subtle fluid to medicinal purposes, was thought of, soon after the discovery of the electric shock. At the first introduction of electricity as a remedy, it was very highly celebrated for its efficacy in a number of diseases; and various turns of reputation, its medical virtues seem now to be pretty well established.

The medicinal operation of electricity may be refered to its stimulant power. It produces forcible contractions in the ir-ritable fibre; excites therefore to action if duly applied; and when in excess, immediately exhausts irritability It possesses the important advantage of being easily brought to act locally, and of being confined to the part to which it is applied, while it can also be employed in every degree of force.

Electricity is applied to the body under the form of a stream or continued discharge of the fluid, under that of sparks, and under that of shock; the first being more gentle, the second more active, and the last much more powerful than either of the others. The stream is applied by connecting a pointed piece of wood, or a metal wire, with the prime conductor of the electrical machine, and holding it by a glass handle, one or two inches from the part, to which it is to be directed A very moderate stimulant operation is thus excited, which is better adapted to some particular cases, than the more powerful spark or shock. The spark is drawn by placing the patient on the insulated stool, connected with the prime conductor, and, while the machine is worked, bringing a metal knob within a short distance of the part, from which the spark is to be taken. A sensation somewhat pungent is excited, and a slight muscular contraction may be produced; these effects being greater or less, according to the distance at which the knob is held, if the machine be sufficiently powerful. The shock is given by discharging the Leyden phial, making the part of the body, through which it is intended to be transmitted, part of the circuit. The sensation it excites is unpleasant, and the muscular contractions considerable, if the shock be moderately strong.

The general rule for the medical employment of electricity, is to apply it at first under the milder forms, and gradually to raise it, if necessary to the more powerful. Mr. Cavallo, who has published the latest and best treatise on medical electricity, entirely disapproves of giving violent shocks and finds it most efficacious to expose the patient to the electrical aura discharged from an iron or a wooden point; or, if shocks be given, they should be very slight, and not exceed thirteen or fourteen at a time. In this way he recommends it as effectual in a great number of disorders. The patient may be electrified from three to ten minutes; but, if sparks be drawn, they should not exceed the number of shocks above-mentioned.

Rheumatic disorders, even of long standing, are relieved, and generally quite cured, by only drawing the electric fluid by a wooden point from the part, or by drawing sparks through flannel. The operation should be continued for about four or five minutes, repeating it once or twice, every day.

Deafness, except when it is occasioned by obliteration, or other improper configuration of the parts, is either entirely or partly cured by drawing the sparks from the ear with the glass tube director, or by drawing the fluid with a wooden point.

Toothach, occasioned by cold, rheumatism, or inflammation, is generally relieved by drawing the electric fluid with a point, immediately from the part, and also externally from the face. But when the body of the tooth is affected, electrization is of no use, for it seldom or never relieves the disorder, and sometimes increases the pain to a prodigious degree.

Swellings, in general which do not contain *matter*, are frequently cured by drawing the electric fluid with a wooden point. The operation should be continued for three or four minutes every day, and in obstinate cases it is sometimes necessary to persevere in its use for several weeks.

In inflammations of the eyes, the throwing of the electric fluid, by means of a wooden point, is often attended with great benefit; the pain being quickly abated, and the inflammation being generally dissipated in a few days. in these cases, the eyes of the patient must be kept open; and care should be taken not to bring the wooden point very near it, for fear of any spark. Sometimes it is sufficient to throw the fluid with a metal point; for in these cases, too great an irritation should always be avoided. It is not necessary to continue this operation for three or four minutes without intermission, but after throwing the fluid for about half a minute, a short time may be allowed to the patient to rest and wipe his tears, which generally flow very copiously; then the operation may be continued again for another half minute, and so on for four or five times every day.

Palsies are seldom perfectly cured by means of electricity, especially when they are of long standing; but they are generally relieved to a certain degree; the method of electrifying in those cases, is to draw the fluid with the wooden point, and to draw sparks through flannel, or through the usual covering of the parts, if they are not too thick. The operation may be continued for about five minutes per day.

Ulcers, or open sores of every kind, even of long standing, are generally disposed to heal by electrization. The general effects are a diminution of the inflammation, and first a promotion of the discharge of properly formed matter; which discharge gradually lessens, according as the limits of the sore contract, till it be quite cured. In these cases, the gentlest electrization must be used, in order to avoid too great an irritation, which is generally hurtful. To draw or throw the fluid with a wooden, or even with a metal point, for three or four minutes per day, is fully sufficient.

Cutaneous Eruptions have been successfully treated, with electrization; but in these cases it must be observed, that if the wooden point be kept too near the skin, so as to cause any considerable irritation, the eruption will be caused to spread more; but if the point be kept at about six inches distance, or farther if the electrical machine be very powerful, the eruptions will be gradually diminished till they are quite cured. In this kind of disease, the immediate and general effect of the wooden point, is to occasion a warmth about the

electrified part, which is always a sign that the electrization is rightly administered.

Scrofulous tumors, when they are just beginning, are generally cured by drawing the electric fluid with a wooden or metal point from the part. This is one of those kinds of diseases in which the action of electricity requires particularly the aid of other medicines in order to effect a cure more easily; for scrofulous affections commonly accompany a great laxity of the habit, and a general cachexy, which must be obviated by proper remedies.

Locked jaw has in some instances been speedily cured by small shocks passing through the jaws.

Nervious headachs, even of long standing, are generally cured by electrization. For in this disease, the electric fluid must be thrown with a wooden, and even sometimes with a metal point, all round the head successively. Sometimes exceeding small shocks have been administered; but these can seldom be used, because the nerves of persons subject to this disease are so very irritable, that the shocks, the sparks, and sometimes even the throwing the electric fluid with a wooden point kept very near the head, throw them into convulsions.

Amenorrhœa, a disease of the female sex, that often occasions the most disagreeable and alarming symptoms, is often successfully and speedily cured by means of electricity, even when the disease is of long standing, and after the most powerful medicines, used for it, have proved ineffectual. The cases of this sort, in which electrization has proved useless, are so few, and the successful ones so numerous, that the application of electricity for this disease, may be justly considered as an efficacious and certain remedy.

Small shocks, that is, of about one twentieth of an inch, may be sent through the pelvis; sparks may be taken through the clothes from the parts adjacent to the seat of the disease; and also the electric fluid may be transmitted, by applying the metallic or wooden extremities of two directors to the hip in contact with the clothes; part of which may be removed, in case they be too thick. Those various applications of electricity should be regulated according to the constitution of the patient. The number of shocks may be about twelve or fourteen. The other applications may be continued for two or three minutes; repeating the operation every day. But either strong shocks, or a stronger application of electricity than the patient can conveniently bear, should be carefully avoided; for by those means, sometimes disagreeable symptoms are produced.

The application of electricity has also been beneficial in other diseases besides the abovementioned; but as the facts are not sufficiently numerous to afford the deduction of any general rules, we have thought not proper to take any particular notice of them. We may lastly observe, that, in many cases, the help of other remedies to be prescribed by the medical practitioner, will be required to assist the action of electricity, which by itself would, perhaps, be useless; and, on the other hand, electrization may often be applied to assist the action of other remedies, as of sudorifics, strengthening medicines, &c. It not unfrequently happens that electricity is relinquished as an unsuccessful remedy, when by a more rigid perseverance a cure might have been effected.

FINIS.

ERRATA

To the Compend of Domestic Midwifery.

Page 7, line 16, from the bottom, for *diminions* read *dimensions.*
10, 16, for *the* read *that;* and line 23, for *or* read *on.*
11, 8, from the bottom, for *regar* read *regard.*
24, 21, for *lengthing* read *lengthening.*
ib. 31, for *or* read *the.*
32, 15, from bottom for *pubis* read *tincœ.*
36, 17, from bottom, for *bondage* read *bandage.*
46, 18, do. for *fictions* read *frictions.*
51, 6, do. for *women* read *woman.*
ib. 2, do. for *valeian* read *valerian.*
53. 4, do. for *pressary* read *pessary.*